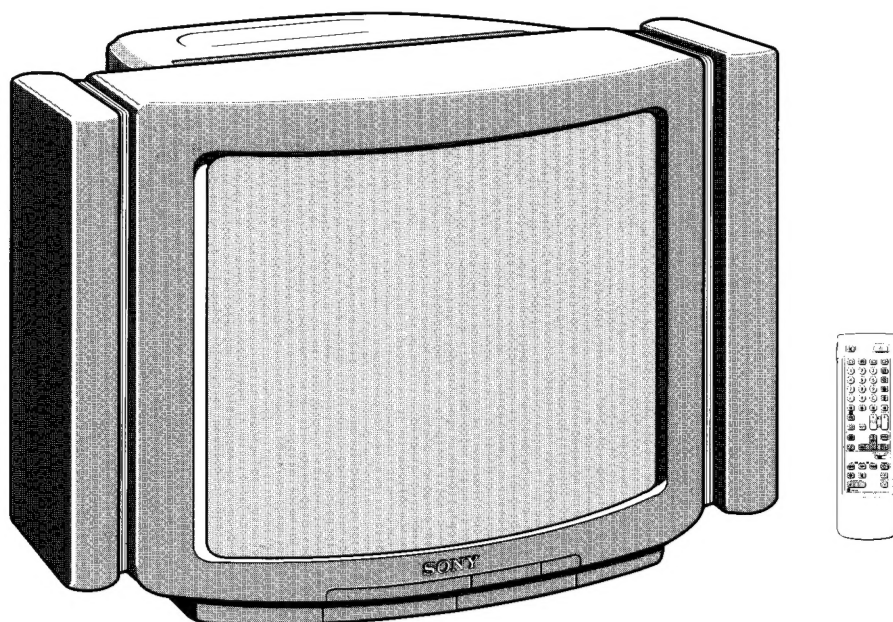


SERVICE MANUAL

AE-2B CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-E2951A	RM-831	Italian	SCC-G59K-A	KV-E2953E	RM-831	Spanish	SCC-G56J-A
KV-E2951B	RM-831	French	SCC-G57J-A	KV-E2951K	RM-831	OIRT	SCC-G73F-A
KV-E2951D	RM-831	AEP	SCC-G45K-A				



TRINITRON® COLOR TV
SONY®

ITEM MODEL	Television system	Stereo system	Channel coverage	Color system
Italian	B/G/H, D/K	GERMAN Stereo	ITALIA VHF:A-H2 (C) UHF:21-69 PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 D/K VHF:R01-R12 UHF:R21-R69	PAL, NTSC4.43, NTSC3.58 (VIDEO IN)
French	B/G/H, D/K L, I	GERMAN Stereo	L VHF:F02-F10 UHF:F21-F60 CABLE:B-Q B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69 I UHF:B21-B69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
AEP	B/G/H, D/K	GERMAN Stereo	PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
Spanish	B/G/H, D/K	GERMAN/NICAM Stereo	PAL B/G VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL NTSC4.43, NTSC3.58 (VIDEO IN)
OIRT	B/G/H, D/K	EASTERN Stereo	PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)

MODEL	Italian	French	AEP	Spanish	OIRT
Power Consumption	116W	129Wh	133W	137W	133W

SPECIFICATIONS

Picture tube Super Trinitron
Approx. 72 cm (29 inches)
(Approx. 68 cm picture measured diagonally)
110°-deflection

Input/Output Terminals

[REAR]

→ 1 21-pin Euro connector
(CENELEC standard)

Inputs for audio and video signals

- inputs for RGB
- outputs of TV video and audio signals
- ↔ 2/→ 2 21-pin Euro connector
- inputs for audio and video signals
- inputs for S video
- outputs for audio and video signals (selectable)
- ↔ 4/→ 4 21-pin Euro connector
- inputs for audio and video signals
- inputs for S video

- outputs for audio and video signals (monitor out)

→ 2, → 4 S video inputs

- 4 pin DIN

⊖ Audio inputs (L, R) -phono jacks

→ S video output - 4 pin DIN

⊖ Audio outputs - phono jacks

⊖ Audio outputs (variable) - phono jacks

External speaker terminals : 2 pin DIN

Woofer terminal : 2-pin

Model name Item	KV-E2951A	KV-E2951B	KV-E2951D	KV-E2953E	KV-E2951K
Pal Comb	OFF	OFF	OFF	OFF	OFF
PIP	ON	ON	ON	ON	ON
RGB Priority	ON	ON	OFF	OFF	OFF
Woofer Box	ON	ON	ON	ON	ON
Just 60 Progr. (refer to I.)	OFF	OFF	OFF	OFF	OFF
Scart 1	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON
Scart 4	ON	ON	ON	ON	ON
Dyn. Convergence	OFF	OFF	OFF	OFF	OFF
Projector	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	ON	ON	ON	ON	ON
Norm B/G	ON	ON	ON	ON	ON
Norm I	OFF	ON	OFF	OFF	OFF
Norm D/K	ON	ON	ON	ON	ON
Norm AUS	OFF	OFF	OFF	OFF	OFF
Norm L	OFF	ON	OFF	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF	OFF
Norm M	OFF	OFF	OFF	OFF	OFF
Bass Offset	0	0	0	0	0
Treble Offset	0	0	0	0	0
DSP / Equalizer	OFF	OFF	OFF	OFF	OFF
DOLBY PROLOGIC	OFF	OFF	OFF	OFF	OFF
NICAM	ON	ON	ON	ON	ON
Double page text (refer to II.)	OFF	OFF	OFF	OFF	OFF
nat-opt byte (refer to IV.)	3	3	3	3	5
Language Preset	Italiano	Francais	Deutsch	None	OIRT

[FRONT]

- 3 Video input-phono jack
- ⊖ Audio input-phono jacks
- 3 S video input 4-pin DIN
- 🎧 Headphone jack : Stereo minijack

Sound output	2x11W Side Speakers (RMS) 25W Woofer (RMS) 2x25W Side Speaker (Music)
Power requirement	220-240V
Dimensions	Approx. 802 x 624 x 525 mm
Weight	Approx. 55 kg
Supplied accessories	RM-831 Remote Commander (1) IEC designation R6 batteries (2)
Other features	NICAM, FASTTEXT

[RM-831]

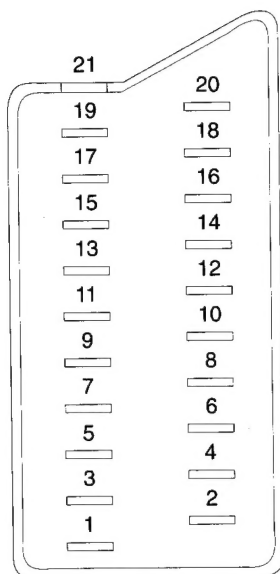
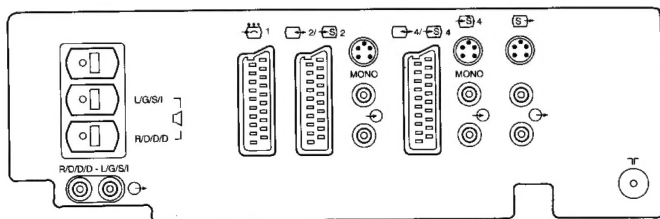
Remote control system, infrared control

Power requirements 1.5V dc
1 battery IEC designation
R6 (size AA)

Dimensions Approx. 65 x 225 x 21 mm (w/h/d)
Weight Approx. 157g (Not including Batteries)

Design and specifications are subject to change without notice.

21 pin connector (→ 1 ↔ 2 / ↔ 4)



Pin No.	1	2	4	Signal	Signal level
1	○	○	○	Audio output B (right)	Standard Level : 0.5V rms Output impedance : Less than 1kohm*
2	○	○	○	Audio input B (right)	Standard Level : 0.5V rms Input impedance : More than 10kohm*
3	○	○	○	Audio output A (left)	Standard Level : 0.5V rms Output impedance : Less than 1kohm*
4	○	○	○	Ground (audio)	
5	○	○	○	Ground (blue)	
6	○	○	○	Audio input A (left)	Standard Level : 0.5V rms Input impedance : More than 10kohm*
7	○	●	●	Blue input	0.7 ± 3dB, 7.5 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More than 10kohms Input capacitance : Less than 2nF
9	○	○	○	Ground (green)	
10	○	○	○	Open	
11	○	●	●	Green	Green signal : 0.7 ± 3dB, 75 ohms, positive
12	○	○	○	Open	
13	○	○	○	Ground (red)	
14	○	○	○	Ground (blanking)	
15	○	-	-	Red input	0.7V ± 3dB, 75 ohms, positive
	-	○	○	(S signal) chroma input	0.3V ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75ohms
17	○	○	○	Ground (video output)	
18	○	○	○	Ground (video input)	
19	○	○	○	Video output	1V ± 3dB, 75ohms, positive sync: 0.3V(-3+10dB)
20	○	-	-	Video input	1V ± 3dB, 75ohms, positive sync: 0.3V(-3+10dB)
	-	○	○	Video input Y (S signal)	1V ± 3dB, 75ohms, positive sync: 0.3V(-3+10dB)
21	○	○	○	Common ground (plug, shield)	

○ Connected ● Not Connected (open)

* at 20Hz - 20kHz

TABLE OF CONTENTS

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CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVAL OF THE ANODE CAP.

WARNING !!

AN ISOLATING TRANSFORMER SHOULD BE USED DURING ANY SERVICE WORK TO AVOID POSSIBLE SHOCK HAZARD, DUE TO A LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARKED  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLIMENTS PUBLISHED BY SONY.


ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ !!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE  SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÉCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT, NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

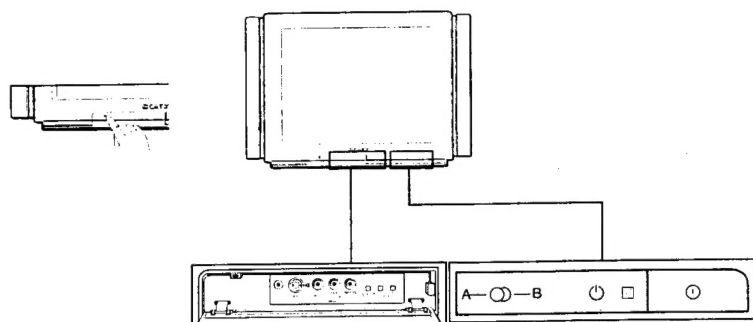
SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

Overview

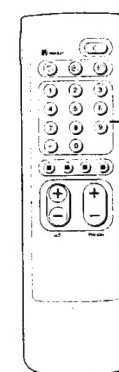
This section briefly describes the buttons and controls on the TV set and on the Remote Commander. For more information, refer to the pages given next to each description.

TV set - front

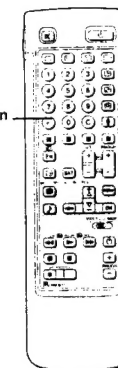


Symbol	Name	Refer to page
⏻	Main power switch	42
⏻	Standby indicator	42
A-CD-B	Stereo A/B indicators	44
🎧	Headphones jack	51
3, 3, 3	Input jacks (S-video/video/audio)	51
⏻	Function selector (Programme/volume/input)	42
⏻	Adjustment buttons for function selector	42

Remote Commander RM-831



Simple side



Full-Function side

Note
The SAT button does not operate with this TV.

TV/Teletext-operation

Symbol	Name	Refer to Page
🔇	Mute on/off button	43
⏻	Standby button	42
⏻	TV power on/TV mode selector button	42
📺	Teletext button	43
📺	Input mode selector	43
📺	Output mode selector	51
1,2,3,4,5,6,7,8,9, and 0	Number buttons	42
⏻	Double-digit entering button	42
C	Direct channel entering button	39
⏻	Volume control button	42
PROGR +/-	Programme selectors	42
📺	Teletext page access buttons	47
📺	Picture adjustment button	44
📺	Sound adjustment button	44
📺	On-screen display button	43
📺	Teletext hold button	47
📺	Time display button	43
📺	Fasttext buttons	47

PIP (Picture in picture) operation

Symbol	Name	Refer to Page
📺	PIP on/off button	46
📺	PIP source selector	46
📺	Swap button	46
📺	PIP position changing button	46

Menu operation

Symbol	Name	Refer to Page
MENU	Menu on / off button	36
⏻	Select buttons	36
OK	OK (confirming) button	36
⏻	Back button	36

Video operation

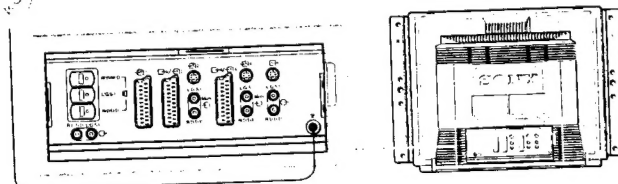
Symbol	Name	Refer to Page
VTR1/2/3	Video equipment selector	52
MDP		
⏻	Video equipment operation buttons	52
PROGR +/-		

A detailed diagram of a mechanical assembly, likely a door lock or latch mechanism. The central component is a rectangular body with a curved front. Arrows indicate the sequence of assembly: 1. A top plate is added to the top. 2. A handle is added to the top. 3. A side plate is added to the left. 4. A side plate is added to the right. 5. A bottom plate is added to the bottom. 6. A key is inserted into the top. 7. A small component is added to the top right. 8. A small component is added to the bottom left. 9. A small component is added to the bottom right. 10. A small component is added to the bottom left.

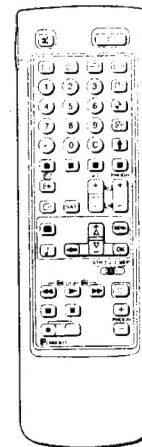
A diagram showing the connection of the antenna cable to the receiver's antenna terminals. The antenna cable, which has a coiled section, is shown with its two conductors connected to the 'ANTENNA' terminals on the receiver's front panel. The receiver panel also features other controls like 'TUNING', 'VOLUME', and 'POWER'.

Safety Information: If the side speakers are not connected to the set, make sure to close the side openings using the supplied plugs. Never insert any objects through the openings.

4



GB



The automatic method is easier if you want to preset all receivable channels at once. Use the manual method if you only have a few channels and want to preset channels one by one. The manual method is also convenient for allocating programme numbers to various video input sources.

1 Choose a language

-

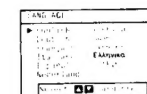


Fig. 1.



①

-
- File menu in the 'Paint' application showing options: Open..., Save, Save As..., Print..., Copy, Paste, Undo, Redo, Cut, and Quit.

Fig. 2.

To go back to the normal TV picture:
Press MENU. Normal TV picture will be restored after one minute if menu functions are not selected.

Press MENU to stop the function.

With this method, you can preset all receivable channels at once.

To stop automatic channel presetting:
Press \leftarrow on the Remote Commander.

Notes:

• After presetting the channels automatically, you can check which channels are stored on which programme positions. For details, see "Using the Programme Table" on page 44.

• You can sort the programme positions to have them appear on screen in the order you like. For details, see "Sorting Programme Positions" on page 39.

Note:
Programme names are automatically taken from Teletext if available. If not, please refer to page 40 "Captioning a Station name" for more information.

Use this method if there are only a few channels in your area to preset or if you want to preset channels one by one. You may also allocate programme numbers to various video input sources.

If you have made a mistake:
Press \leftarrow to go back to the previous position.
To go back to main menu:
Keep pressing \leftarrow .
To go back to the normal TV picture:
Press MENU.

3 Preset channels automatically

- 1 Select \rightarrow Preset \leftarrow with Δ + or ∇ - and press OK. The \rightarrow PRESET \leftarrow menu appears. (See Fig. 3.)
- 2 Select \rightarrow Auto Programme \leftarrow with Δ + or ∇ - and press OK. The \rightarrow AUTO PROGRAMME \leftarrow menu appears. (See Fig. 4.)
- 3 Press OK.
Select if necessary the TV broadcast system with Δ + or ∇ - and press OK. (B/G for western European countries, D/K for eastern European countries) The first element of the "PROG" number will be highlighted.
- 4 Select the programme (number button) from which you want to start presetting. Select the first element of the double-digit number with Δ + or ∇ - or the number buttons (e.g. For "04", select "0" here) and press OK. The second element of "PROG" will be highlighted.
- 5 Select the second element of the double-digit number with Δ + or ∇ - or the number buttons (e.g. For "04", select "4" here) (See Fig. 5.) and press OK.
- 6 Select "C" or "S" with Δ + or ∇ - and press OK. The automatic channel presetting starts.
When presetting is finished the preset menu reappears. All available channels are now stored on successive number buttons. (Press menu to restore normal TV picture.)



Fig. 3.

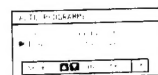


Fig. 4.



Fig. 5.

GB

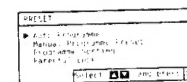


Fig. 6.



Fig. 7.

To tune in a channel by frequency:
After selecting F in step 6, enter three digits using the number buttons. Press OK.

- 3 Using Δ + or ∇ -, select the programme position (number button) to which you want to preset a channel, and press OK.
- 4 Keep pressing ∇ - to select programme numbers higher than 10.
- 5 Select if necessary the TV broadcast system (B/G for western European countries, D/K for eastern European countries) or a video input source (EXT) with Δ + or ∇ -. Then press OK. The CH position will be highlighted. (See Fig. 8.)
- 6 Using Δ + or ∇ -, select C (to preset a regular channel), or F (to tune in by frequency), or S (cable channel) and press OK. The first element of the "CH" number will be highlighted. If you have selected EXT in step 5, select the video input source with Δ + or ∇ -. (See Fig. 9.)

There are two ways to preset channels. If you know the channel number, go to step "7-Manual".

or

if you don't know the channel number, go to step "7- Search".

7 Manual

- a Select the first element of the "CH" number with Δ + / ∇ - or the number buttons and press OK. The second element of the "CH" number will be highlighted.
- b Select the second element of the number with Δ + / ∇ - or the number buttons. The selected number appears. (See Fig. 10.)
- c Press OK. The "SEARCH" position is highlighted and the selected channel is now stored. (See Fig. 11.)
- d Press OK until the cursor appears by the next programme position.
- e Repeat steps 3 to 7 to preset other channels.

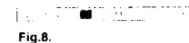


Fig. 8.



Fig. 9.

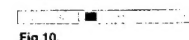


Fig. 10.



Fig. 11.



Fig. 12.

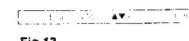
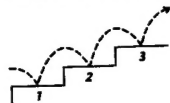


Fig. 13.

7 Search

- a Press OK repeatedly until the colour of the SEARCH position changes.
- b Start searching for the channel with Δ + (up) or ∇ - (down). The CH position changes colour. (See Fig. 12.) The CH number starts counting up or downwards. When a channel is found, it stops. (See Fig. 13.)
- c Press OK if you want to store this channel. If not, press Δ + or ∇ - to continue channel searching.
- d Press OK until the cursor appears by the next programme position.
- e Repeat steps 3 to 7 to preset other channels.

Additional Presetting Functions

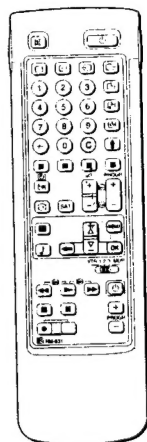


This section shows you additional presetting functions such as sorting or skipping programme positions, captioning a station name, manual fine-tuning, and using the parental lock.

Before you begin

- Check that the Full Function side of the Remote Commander is visible
- Locate the Menu operation buttons.

PROGRAMME SORTING



For programme positions beyond 15:
The display scrolls automatically.

If you have made a mistake:
Press \leftarrow to go back to the previous position.
To go back to main menu:
Keep pressing \leftarrow .
To go back to the normal TV picture:
Press MENU.

Sorting Programme Positions

With this function, you can sort the programme positions to a preferable order.

- 1 Press MENU to display the main menu.
- 2 Select «Preset» with Δ or ∇ and press OK. The «PRESET» menu appears.
- 3 Select «Programme Sorting» with Δ or ∇ and press OK. The «PROGRAMME SORTING» menu appears. (See Fig. 14.)
- 4 Using Δ or ∇ , select the programme position you want to move to another programme position and press OK. The colour of the selected position changes. (See Fig. 15.)
- 5 Using the number buttons select the programme position (e.g. 05 for programme position 5) to which you want to move the selected programme and press OK. Now the two programme positions have been sorted. (See Fig. 16.)
- 6 Repeat steps 4 and 5 to exchange other programme positions.

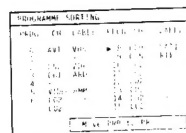


Fig. 14.

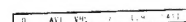


Fig. 15.

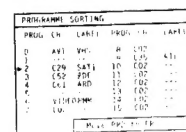


Fig. 16.

Tuning in a Channel Temporarily

You can tune in a channel temporarily, even when it has not been preset. Use the buttons on the Full-Function side of the Remote Commander.

- 1 Press C on the Remote Commander. For cable channels, press C twice. The indication "C" ("S" for cable channels) appears on the screen.
- 2 Enter the double-digit channel number using the number buttons (e.g. for channel 4, first press 0, then 4). The channel appears. However, the channel will not be stored.

C

MANUAL PROGRAMME PRESET

Skipping Programme Positions

You can skip unused programme positions when selecting programmes with the PROG \pm buttons. However, the skipped programmes may still be called up when you use the number buttons.

- 1 Press MENU to display the main menu.
- 2 Select «Preset» with Δ or ∇ and press OK. The «PRESET» menu appears.
- 3 Select «Manual Programme Preset» with Δ or ∇ and press OK. The «MANUAL PROGRAMME PRESET» menu appears. (See Fig. 17.)
- 4 Using Δ or ∇ , select the programme position which you want to skip and press OK. The «SYSTEM» position changes colour. (See Fig. 18.)
- 5 Press Δ or ∇ until --- appears in the SYSTEM position. (See Fig. 18.)
- 6 Press OK. (See Fig. 19)
- 7 Repeat steps 4 to 6 to skip other programme positions.



Fig. 17.



Fig. 18.

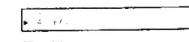


Fig. 19.

MANUAL PROGRAMME PRESET

Captioning a Station Name

Programme names are usually automatically taken from Teletext if available

You can also "name" a channel or an input video source using up to five characters (letters or numbers) to be displayed on the TV screen (e.g. ZDF). Using this function, you can easily identify which channel or video source you are watching.

- 1 Press MENU to display the main menu.
- 2 Select «Preset» with Δ or ∇ and press OK. The «PRESET» menu appears.
- 3 Select «Manual Programme Preset» with Δ or ∇ and press OK. The «MANUAL PROGRAMME PRESET» menu appears. (See Fig. 20.)
- 4 Using Δ or ∇ , select the programme position you want to caption and press OK repeatedly until the first element of the LABEL position is highlighted.
- 5 Select a letter or number with Δ or ∇ and press OK. The next element will be highlighted. Select other characters in the same way. If you want to leave an element blank, select - and press OK. (See Fig. 21.)
- 6 After selecting all the characters, press OK repeatedly until the cursor appears by the next programme position (at the left margin). Now the caption you chose is stored. (See Fig. 22.)

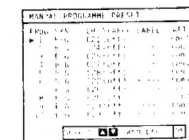


Fig. 20.

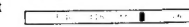


Fig. 21.



Fig. 22.

If you have made a mistake:
Press \leftarrow to go back to the previous position.
To go back to main menu:
Keep pressing \leftarrow .

To go back to the normal TV picture:
Press MENU.

MANUAL PROGRAMME PRESET

Manual Fine-Tuning

Normally, the AFT (automatic fine-tuning) is already operating. However, if the picture is distorted, you can use the manual fine tuning function to obtain better picture reception.

Manually fine tuned channels will be identified by **F** on the on-screen indication (see page 43).

To reactivate AFT (automatic fine tuning):
Repeat from the beginning and select "ON" in step 5.

- 1 Press MENU to display the main menu.
- 2 Select "Preset" with Δ or ∇ and press OK. The "PRESET" menu appears.
- 3 Select "Manual Programme Preset" with Δ or ∇ and press OK. The "MANUAL PROGRAMME PRESET" menu appears. (See Fig. 23.)
- 4 Using Δ or ∇ , select the programme position corresponding to the channel which you want to manually fine-tune, and press OK repeatedly until the AFT position changes colour.
- 5 Fine-tune the channel with Δ or ∇ so that you get the best TV reception. As you press the cursor buttons, the frequency changes from -15 to +15. (See Fig. 24.)
- 6 After fine tuning, press OK. The cursor appears beside the next programme position (at the left margin). (See Fig. 25.) Now the fine-tuned level is stored.
- 7 Repeat steps 4 to 6 to fine-tune other channels.



Fig. 23.

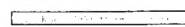


Fig. 24.

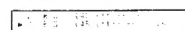


Fig. 25.

GB

PARENTAL LOCK

Parental Lock

You can prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

If you try to select a programme that has been blocked:
The message "Locked" appears on the blank TV screen.

- 1 Press MENU to display the main menu.
- 2 Select "Preset" with Δ or ∇ and press OK. The "PRESET" menu appears.
- 3 Select "Parental Lock" with Δ or ∇ and press OK. The "PARENTAL LOCK" menu appears. (See Fig. 26.)
- 4 Using Δ or ∇ , select the programme position you want to block and press OK. The CH and LABEL of the selected programme number change colour indicating that this programme is now blocked. (See Fig. 27.)



Fig. 26.

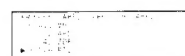


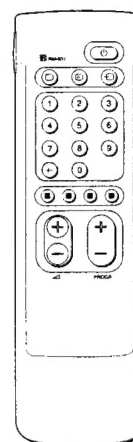
Fig. 27.

- 5 Repeat step 4 to block other programme positions.

Cancelling blocking

- 1 On the "PARENTAL LOCK" menu, select the programme position you want to unblock with Δ or ∇ .
- 2 Press OK. The CH and LABEL change to normal colour indicating that the blocking has been cancelled.

Watching the TV



If no picture appears when you depress \odot on the TV:
And if the standby indicator on the TV is lit, the TV is in standby mode. Press \odot or one of the number buttons to switch it on.

This section explains the basic functions you use while watching TV. Most of the operations can be done using the simple side of the Remote Commander.

Switching the TV on and off

Switching on

Depress \odot on the TV.

Switching off temporarily

Press \odot on the Remote Commander. The TV enters standby mode and the standby indicator on the front of the TV lights up.

To switch on again

Press \odot , PROG \pm , or one of the number buttons on the Remote Commander.

Switching off completely

Depress \odot on the TV.

Selecting TV Programmes

Press PROG \pm or press number buttons.

To select a double-digit number

Press \pm , then the numbers.
For example, if you want to choose 23, press \pm , 2, and 3.

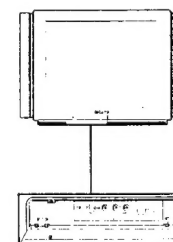
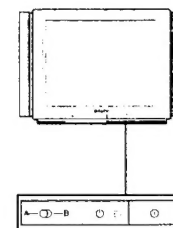
Adjusting the Volume

Press Δ \pm .

Operating the TV Using the Buttons on the TV

With the buttons on the TV, you can select programmes, adjust the volume, and select video input sources.

- Press Δ \pm button repeatedly until the programme number, Δ (for volume), or ∇ (for video input picture) appears. Then adjust with the \pm buttons.
- Press \pm buttons to switch on the TV from the standby mode.
- Press \pm simultaneously to reset picture and sound controls to the factory preset level (RESET symbol \dots is displayed.)



Adjusting and Setting the TV Using the Menu

Watching Teletext or Video Input

Watching teletext

- Press **TEXT** to view the teletext.
- Press three number buttons to select a page.
- Press one of the coloured buttons for fasttext operation.
- Press **TEXT** (PAGE +) or **TEXT** (PAGE -) for the next or preceeding page.
- To go back to the normal TV picture, press **OK**.

Watching a video input picture

Press **VIDEO** repeatedly until the desired video input appears. To go back to the normal TV picture, press **OK**.

More Convenient Functions

Use the Full-Function side of the Remote Commander.

Displaying the on screen indications

- Press **ON** once to display all the indications. They will disappear after some seconds.
- Press **ON** twice to have the programme number and label stay on screen. Press twice again to make indications disappear.

Muting the sound.

Press **MUTE**.
To resume normal sound, press **MUTE** again.

Displaying the time

Press **TIME**. This function is available only when teletext is broadcast.
To make the time display disappear, press **TIME** again.

Displaying of the Programme Table

Press **OK**. A Programme Table will be displayed on the right side of the TV screen (See Fig. 28)

Selecting of TV programmes

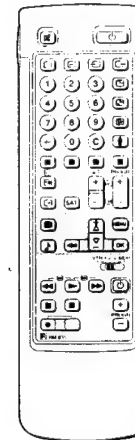
Press **PROGR** +/- or select the desired programme position using **Δ**+ or **∇**- and press **OK**.

1	4:00
2	4:05
3	4:10
4	4:15
5	4:20
6	4:25
7	4:30
8	4:35
9	4:40
10	4:45
11	4:50
12	4:55

Fig. 28.

To make the Programme Table disappear Press **MENU**.

PICTURE CONTROL SOUND CONTROL



GB

Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste. In addition, you can change the aspect ratio of the TV display for wide screen effect. You can also select dual sound (bilingual) programmes when available, adjust the sound for listening with the headphones **HP**, or individually adjust and store the volume level of each channel (volume offset).

- Press **PICT** (for picture) or **SND** (for sound) on the Remote Commander.
or
Press **MENU** and select **Picture Control** or **Sound Control**, then press **OK**.
The **PICTURE CONTROL** or **SOUND CONTROL** menu appears. (See Fig. 29 or Fig. 30)
- Using **Δ**+ or **∇**-, select the item you want to adjust and press **OK**. The selected item changes colour. (See Fig. 31)
- Adjust the setting with **Δ**+ or **∇**- and press **OK**.
The cursor appears beside the next item (at the left margin). (See Fig. 32)
For the effect of each control, see the table below.
- Repeat steps 2 and 3 to adjust other items.



Fig. 29.



Fig. 30.



Fig. 31.

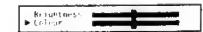


Fig. 32.

Effect of each control

PICTURE CONTROL	Effect
Contrast	Less — — More
Brightness	Darker — — Brighter
Colour	Less — — More
Hue	Greenish — — Reddish
Sharpness	Softer — — Sharper
Reset	Resets picture to the factory preset levels.
Format	4 : 3 : Normal 16 : 9 : Wide screen effect

SOUND CONTROL	Effect
Volume	Less — — More
Treble	Less — — More
Bass	Less — — More
Balance	More left — — More right
Reset	Resets sound to the factory preset levels.
Loudness	off : Normal on : When listening to low volume sound.
Space	off : Normal on : Obtain acoustic sound effect.
Dual Sound	A : left channel B : right channel stereo mono The selected mode of the A-CD-B indicator on the TV lights up.
Volume offset	- 7 Less 0 More + 7
Headphones:	
Volume	Less — — More
Dual Sound	A : left channel B : right channel stereo mono

If you have made a mistake:
Press **←** to go back to the previous position.
To go back to the main menu:
Keep pressing **←**.
To go back to the normal TV picture:
Press **MENU**.

Note:
HUE is only available for NTSC colour system.

Note on LINE OUT:
The audio level and the dual sound mode output from the G- jack on the rear correspond to the HEADPHONES VOLUME and DUAL SOUND settings.


When watching a video input source with stereo sound:
You can select DUAL SOUND to change the sound.

PROGRAMME TABLE

To go back to the normal TV picture: Press MENU.

TIMER

To switch off the timer: Select "OFF" in step 3.

To check the remaining time: Press .



Using the Programme Table

On this table, you can see which channel is preset to which programme position. You can also select programmes using this table.

- 1 From the main menu, select »Programme Table« with  or  and press OK.

The »PROGRAMME TABLE« menu appears. (See Fig. 33)

To scroll to higher programme numbers, press .

- 2 To select a programme using this menu, select the programme number with  or  and press OK. The selected programme appears.

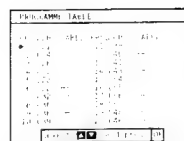






Fig. 33.



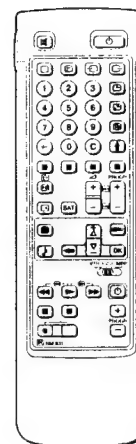
Fig. 34.

Using the Sleep Timer

You can select a time period after which the TV automatically switches into standby mode.

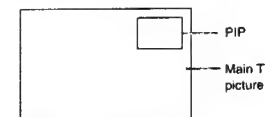
- 1 From the main menu, select »Timer« with  or  and press OK. The »Timer« menu appears. (See Fig. 34.)
- 2 Press OK. The time period option changes colour.
- 3 Select the time period with  or . The time period (in minutes) changes as follows:
10→20→30→40→50→60→70→80→90
OFF
- 4 After selecting the time period, press OK. The cursor moves back to the left margin and the timer starts counting.

PIP (Picture In Picture)



Note
RGB input source cannot be displayed in PIP.

With this function you can display a "PIP screen" (small picture) within the main TV picture. In this way you can watch or monitor the video output from any connected equipment (for example from a VTR) while watching TV or vice versa. For information about connection of other equipment, refer to page 50.



Switching PIP on and off

Press .


The PIP screen will be displayed. The PIP picture will come from the source chosen when the TV was last used.

To switch PIP off

Press  again.

Selecting a PIP source

Press .

The symbol  will be displayed at the bottom, left-hand corner of the screen.

Press  repeatedly until the desired PIP source is indicated (e.g. TV, AV1, AV2, YC2, AV3, YC3, AV4, YC4).

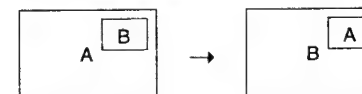
Note

If no video source has been connected, the PIP picture will be noisy or dark.


Swapping screens

Press .


The main screen will switch the picture with the PIP screen.

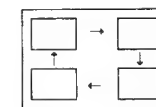


Note

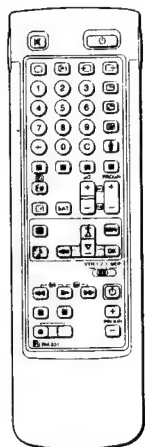
If a TV programme is on the PIP screen and a video source on the main picture, and you want to change channels, first press  and then the programme buttons or PROG +/-.

Changing the position of the PIP

Press  repeatedly to change the position of the PIP screen within the main screen. There are four different positions available.



Teletext



Note:
Teletext errors may occur if the broadcasting signals are weak.

With the simple side of the Remote Commander:
You can switch teletext on and off, operate Fasttext, and directly select page numbers.

Note:
Fasttext operation is only possible, if the TV station broadcasts Fasttext signals.

TV stations broadcast an information service called Teletext via the TV channels. Teletext service allows you to receive various information pages such as weather reports or news at any time you want. For advanced teletext operation, use the buttons on the Full-Function side of the Remote Commander.

Direct Access Functions

Switching Teletext on and off

- 1 Select the TV channel which carries the teletext broadcast you want to watch.
- 2 Press **⏻** to switch on teletext.
A teletext page will be displayed (usually the index page). If there is no teletext broadcast, "No text available" is displayed on the information line at the top of the screen.

To switch teletext off
Press **⏻**.

Selecting a teletext page With direct page selection

Use the number buttons to input the three digits of the chosen page number.
If you have made a mistake, type in any three digits. Then re-enter the correct page number.

With page-catching

- 1 Select a teletext page with a page overview (e.g. index page).
- 2 Press **OK**. Using **⬆** or **⬇**, select the desired page. "Page-Catching" will be displayed on the information line. Press **OK**. The requested page will appear in a few seconds.
Press **⏻** to resume normal teletext reception.

Accessing next or preceding page

Press **⏮** (PAGE +) or **⏭** (PAGE -).
The next or preceding page appears.

Superimposing the teletext display on the TV programme

- Press **⏻** once in teletext mode or twice in TV mode.
- Press **⏻** again to resume normal teletext reception.

Preventing a teletext page from being updated

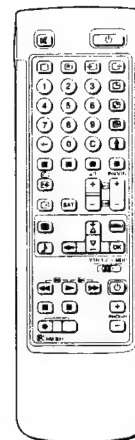
- Press **⏻** (HOLD). The HOLD symbol "⏻" is displayed on the information line.
- Press **⏻** to resume normal teletext reception.

Using Fasttext

With Fasttext you can access pages with one key stroke. When a Fasttext page is broadcast, a colour-coded menu will appear at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons on the Remote Commander.

Press the corresponding coloured button on the Remote Commander which corresponds to the colour-coded menu. The page will be displayed after some seconds.

GB



Note:
Some of the features may not be available depending on the Teletext service.

Note on Subtitles:
If the subtitles are not broadcast on page 888, please select the subtitle page using the number buttons.

Using the Teletext Menu

This TV is provided with a menu-guided teletext system. When teletext is switched on, you can use the menu buttons to operate the teletext menu. Select the teletext menu functions in the following way:

- 1 Press **MENU**. The menu will be superimposed on the teletext display. (See Fig. 35)
- 2 Using **⬆** or **⬇**, select the teletext function you want and press **OK**. (See Fig. 36)

USER PAGES/PRESET USER PAGES

See page 49 for information about presetting and operating the user pages.

INDEX

The index will give you an overview of the contents of the teletext and the page numbers.

TOP/BOTTOM/FULL

For convenient reading of a teletext page, you can enlarge the teletext display with the ability to scroll up and down the screen. After having selected the function, an information line "Top/Bottom/Full" will be displayed. (See Fig. 37)

Press **⬆** or **⬇** for Top to enlarge the upper half. For Bottom, keep pressing **⬆** to enlarge the lower half. Press **OK** for Full to resume the normal size.

Press **⏻** to resume normal teletext reception.

TEXT CLEAR

After having selected the function, you can watch a TV programme while waiting for a requested teletext page to be displayed. (The symbol changes colour) (See Fig. 38)

Press **⏻** to view the requested page.

SUBTITLES

Your teletext service will inform you if a TV programme is subtitled. After having selected the function the subtitles will be displayed.

REVEAL

Sometimes pages contain concealed information, such as answers to a quiz. The reveal option lets you disclose the information. After having selected the function, an information line "REVEAL ON/OFF" will be displayed. (See Fig. 39)

Using **⬆** or **⬇**, select ON to reveal the information or OFF to conceal it again.

Press **⏻** to resume normal teletext reception.

TIME PAGE

Your teletext service will inform you, if a time coded page is available. You may have a page (e.g. an alarm page) displayed at a certain time.

- 1 Press **OK**, using **⬆** or **⬇**, select ON and press **OK**.
- 2 To select the desired page, enter the three digits of the page number using the number buttons.



Fig. 35.



Fig. 36.

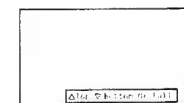


Fig. 37.



Fig. 38.

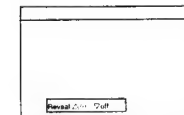
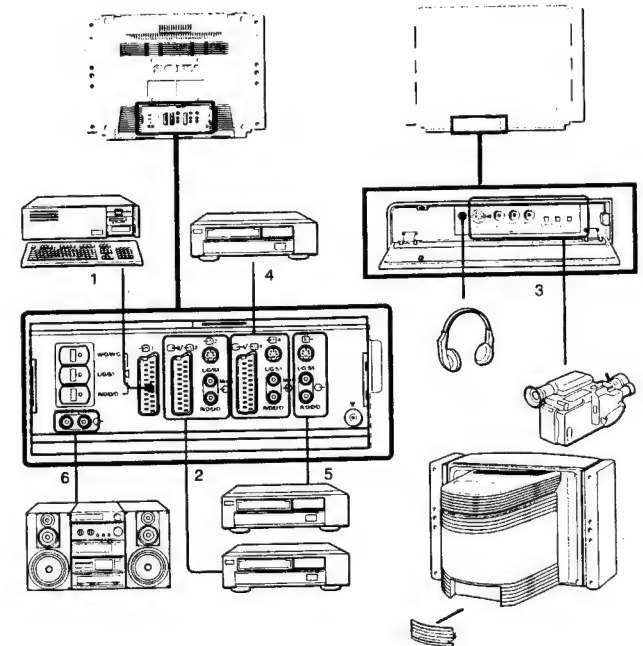


Fig. 39.

Connecting and Operating Optional Equipment

Connecting Optional Equipment

You can connect optional audio-video equipment to this TV such as VTRs, video disc players, and stereo systems.



To connect a VTR using the aerial terminal:
Connect the aerial output of the VTR to the aerial terminal of the TV.
We recommend that you tune in the video signal to programme number "10". For details see "Preset channels manually" on page 36.

If the picture or the sound is distorted:
Move the VTR away from the TV.

Note:
After having connected all optional equipment to the TV, attach the supplied cover onto the rear panel (see illustration at the right).

S-video input (Y/C input):
Video signals may be separated into Y (luminance or brightness) and C (chrominance) signals. Separating the Y and C signals prevents them from interfering with one another, and therefore improves picture quality (especially luminance). This TV is equipped with 2 S-video input jacks through which these separated signals can be input directly.

When connecting a monaural VTR:
Connect only the white jack to both the TV and VTR.

Acceptable input signal	Available output signal
1 Normal audio/video and RGB signal	Video/audio from TV tuner
2 Normal audio/video and S video signal	Video/audio from selected source
3 Normal audio/video and S video signal	No outputs
4 Normal audio/video and S video signal	Video/audio displayed on TV screen (monitor out)
5 No inputs	S video/audio signal displayed on TV screen (monitor out)
6 No inputs	Audio signal (variable)

To cancel the request:
Select "OFF" for the TIME PAGE setting.

To cancel the request:
Select the SUBPAGE setting and press OK.

If two broadcasting stations use the same Teletext:
You can preset one bank to 2 different programme positions.

- To select the desired time, enter four digits for the desired time (e.g. 1800) using the number buttons. Press MENU. The selected time is displayed at the top in the left-handed corner. At the requested time, the page will be displayed.

SUBPAGE

You may want to select a particular teletext page from several subpages which are rotated automatically. After having selected the function, an information line will be displayed at the bottom of the screen.

To select the desired subpage, enter four digits using PROGR +/- or the number buttons. (e.g. enter 0002 for the second page of a sequence).

User Page Bank System

You can store up to 30 pages in the "Teletext page bank system". In this way you have quick access to the pages you watch frequently.

Storing pages

There are 5 "banks" (A to E) for 5 teletext stations. In each bank you can store 6 preferred pages (P1 to P6).

- Press (if Teletext is not on already) and MENU to show the TELETXT MENU display.
- Select "Preset User" Pages with Δ or ∇ and press OK.
- Select the desired bank with Δ or ∇ and press OK. The cursor will go to the first position (P1) of the preferred pages.
- Input the three digits of your first preferred page with the number buttons. The cursor will go to the second position.
- Repeat step 4 for the other 5 page numbers you want to preset. If you do not want to preset all 6 page numbers available, press OK repeatedly until the cursor appears besides the next bank at the left margin.
- Select "Allocate Bank" with Δ or ∇ and press OK.
- Select the programme position for which you have to preset pages with Δ or ∇ and press OK. (See Fig. 40)
- Select the desired bank with Δ or ∇ (Banks A to E are available) and press OK.
- Repeat steps 3 to 8 for the other 4 banks available.

Displaying User Pages

- Select MENU.
- Select "User Pages" with Δ or ∇ and press OK. A table of the stored preferred pages will be displayed. (See Fig. 41)
- Select the desired page with Δ or ∇ and press OK. The page will be displayed after some seconds.

or

You can use the coloured buttons on the Remote Commander to have quick access to the first four User Pages. Page 1 corresponds to the red button, P 2 to the green one, P 3 to the yellow one and P 4 to the blue button.

To select the desired page press the respective coloured button while you are in TV mode. Now the Page number of this teletext page will appear in white at the top in the left-handed corner of the TV screen. When the page number changes colour the page is available. Press the coloured button again to display the page.

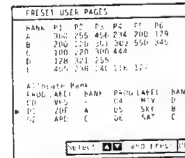


Fig. 40.

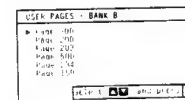
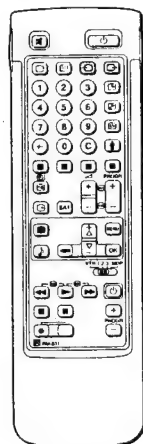


Fig. 41.

GB

Selecting input with PROGR +/- or number buttons:
You can preset video input sources to the programme positions so that you can select them with PROGR +/- or number buttons. For details, see "Preset channels manually" on page 36.



Selecting input and output

This section explains how to view the video input picture (of a video source connected to your TV), and how to select the output signal using direct access buttons or the menu system.

Selecting input

Press \odot repeatedly to select the input source.

The symbol of the selected input source will appear.

To go back to the normal TV picture

Press \square .



Input modes

Symbol	Input signal
\odot 1	Audio/video input through the \odot 1 connector
\odot	RGB input through the \odot 1 connector
\odot 2	Audio/video input through the \odot 2/- \odot 2 connector
\odot 2	S video input through the \odot 2/- \odot 2 or \odot 2 connector
\odot 3	Audio/video input through \odot 3 and \odot 3 on the front
\odot 3	S video input through the \odot 3 connectors on the front (4-pin connector)
\odot 4	Audio/video input through the \odot 4/- \odot 4 connector
\odot 4	S video input through the \odot 4/- \odot 4 or \odot 4 connector (4-pin connector)

GB

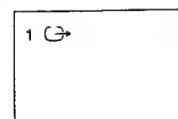
You can also select the input mode using the \odot and \odot buttons on the TV. In this case, first select \odot , and then press \odot buttons to select the input.

Selecting the output

The \odot 2/- \odot 2 connector outputs the source input from the other connectors.

Press \odot repeatedly to select the output.

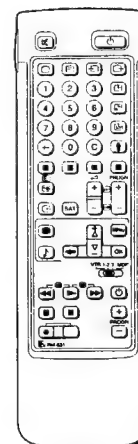
The symbol of the selected output source appears.



Output modes

Symbol \odot 2/- \odot 2 connector outputs

1 \odot	The audio/video signal from the \odot 1 connector
2 \odot	The audio/video signal from the \odot 2/- \odot 2 connector
2 \odot	The audio/S video signal from the \odot 2/- \odot 2 connector
3 \odot	The audio/video signal from the \odot 3, \odot 3 connectors
3 \odot	The audio/S video signal from the \odot 3, \odot 3 connectors
4 \odot	The audio/video signal from the \odot 4/- \odot 4 connector
4 \odot	The audio/S video signal from the \odot 4/- \odot 4 connector
TV \odot	The audio/video signal from the \odot aerial terminal



When recording:
When you use the \odot (record) button, make sure to press this button and the one to the right of it simultaneously.

Checking and selecting the input and output sources using the menu

You can display the menu to see which input sources are selected for the TV screen and PIP screen, and which output source is selected. You can also select them on the menu display.

- 1 Select Video Connection with Δ or ∇ and press OK. The VIDEO CONNECTION menu appears. (See Fig. 42)

You can see which source is selected for the TV and PIP input, and for the output. If you want to select the input and output on this menu, go on to the next step.

- 2 Select TV Screen (input source for the TV screen), PIP (input source for the PIP screen), or output (output source) with Δ or ∇ and press OK. One of the source items changes colour. (See Fig. 43)

- 3 Select the desired source with Δ or ∇ . (See Fig. 44) For details about each source, see the table on page 51.

- 4 Press OK.

The selected source is confirmed, and the cursor appears. (See Fig. 45)

- 5 Repeat steps 2 to 4 to select the source for other inputs or outputs.

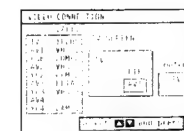


Fig. 42.

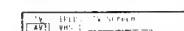


Fig. 43.

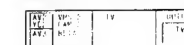


Fig. 44.

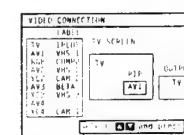


Fig. 45.

Remote Control of Other Sony Equipment

You can use the TV Remote Commander to control most Sony remote-controlled video equipment such as: Beta, 8mm or VHS VTRs or video disc players.

Tuning the Remote Commander to the equipment

- 1 Set the VTR 1/2/3 MDP selector according to the equipment you want to control:

VTR 1: Beta or ED Beta VTR

VTR 2: 8mm VTR

VTR 3: VHS VTR

MDP: Video disc player

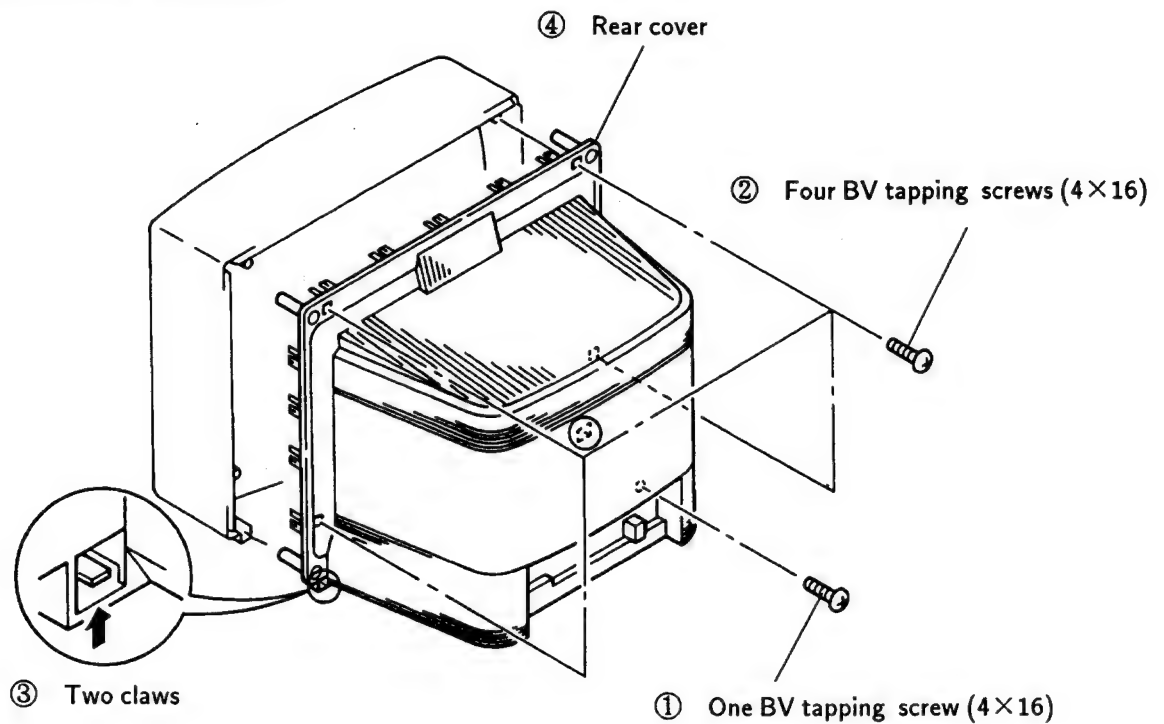
- 2 Use the buttons indicated in the illustration to operate the additional equipment.

If your video equipment is furnished with a COMMAND MODE selector: set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander.

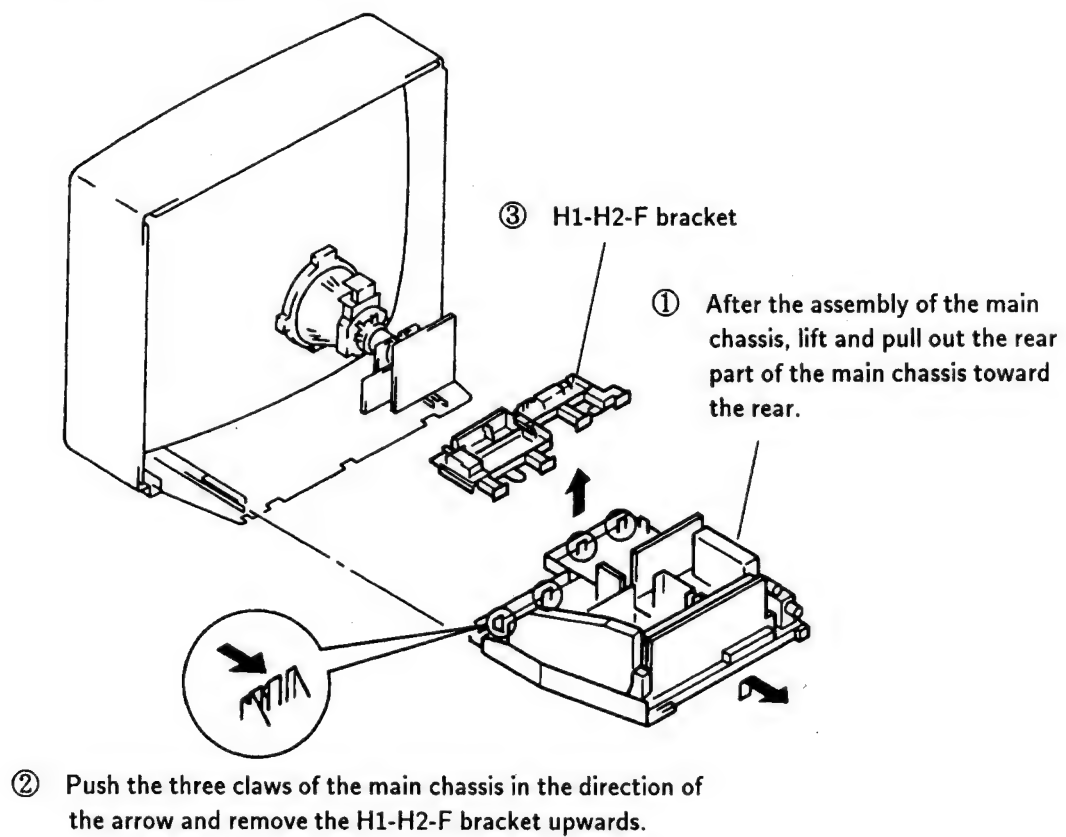
If the equipment does not have a certain function, the corresponding button on the Remote Commander will not operate.

SECTION 2 DISASSEMBLY

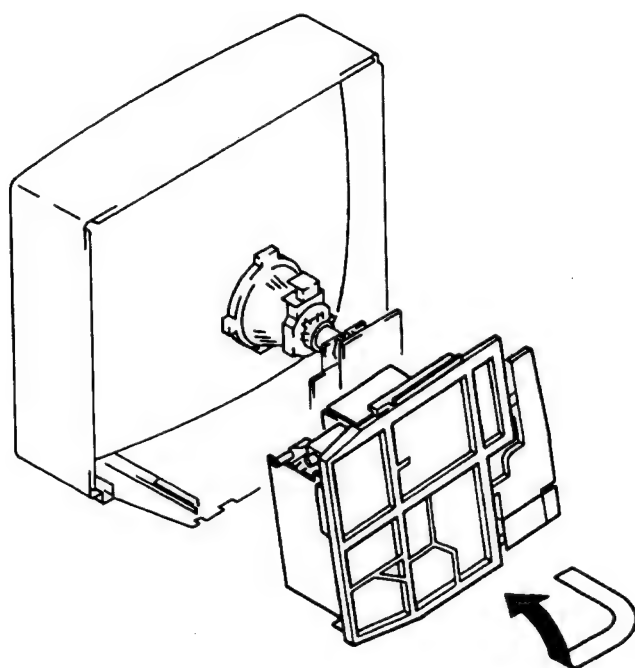
2-1. REAR COVER REMOVAL



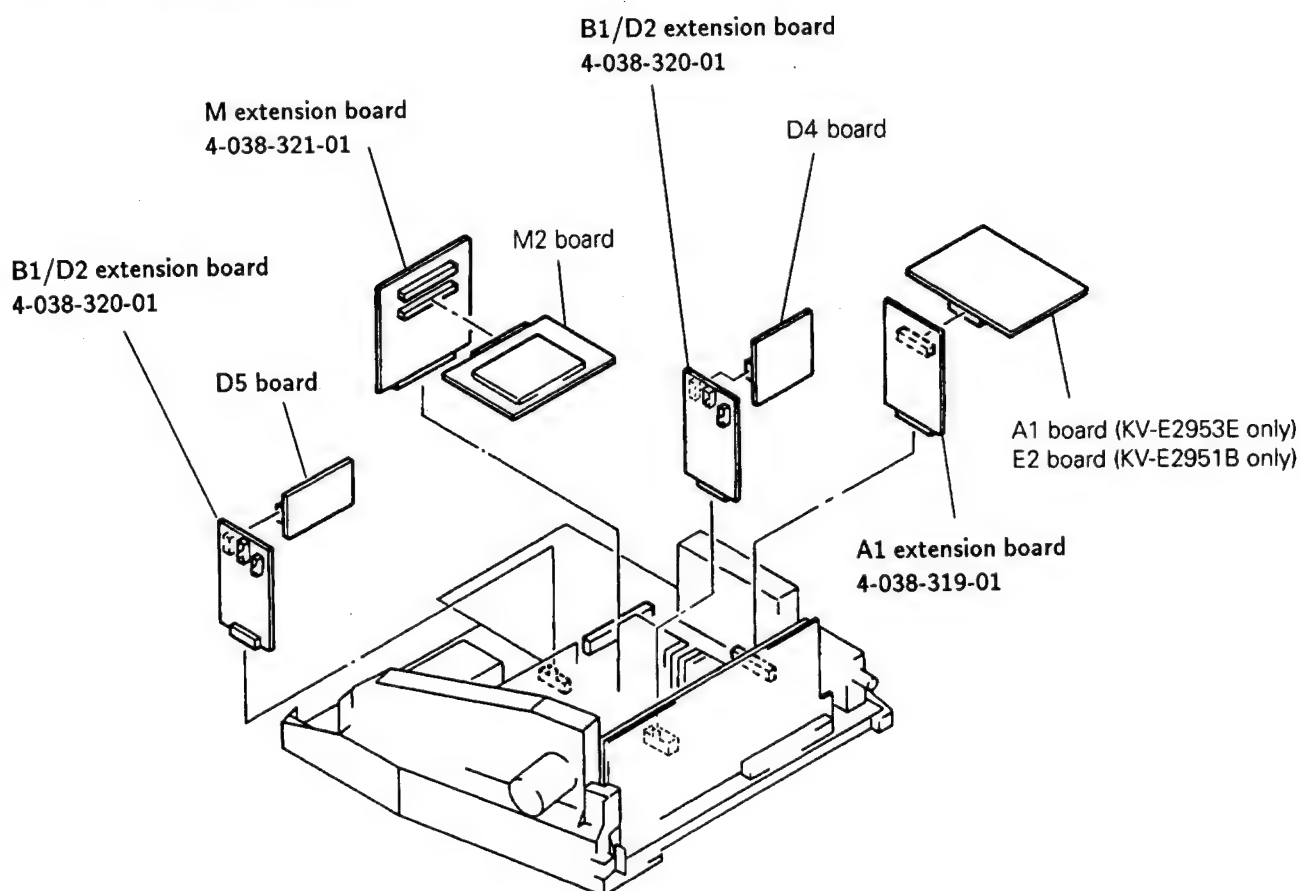
2-2. CHASSIS ASSY REMOVAL

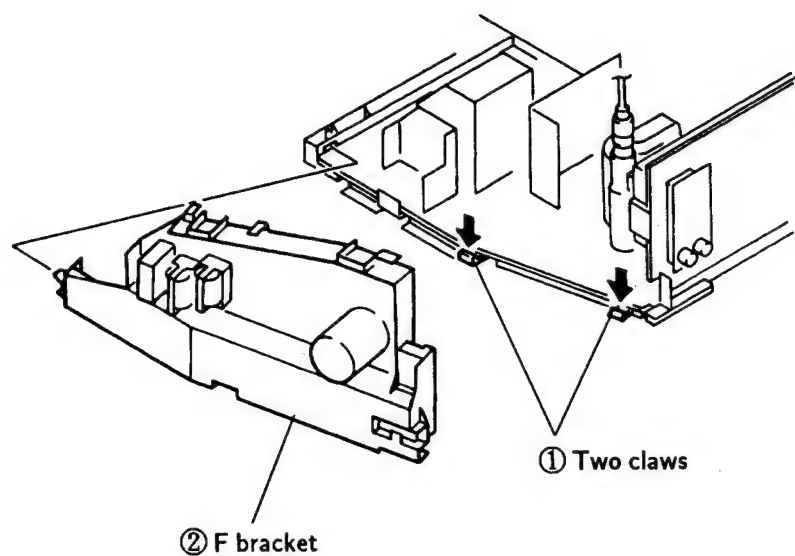
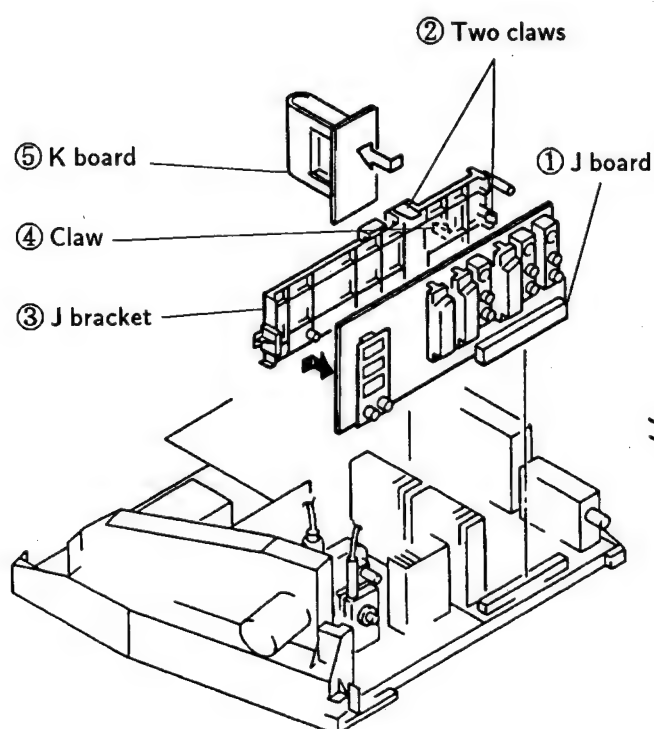
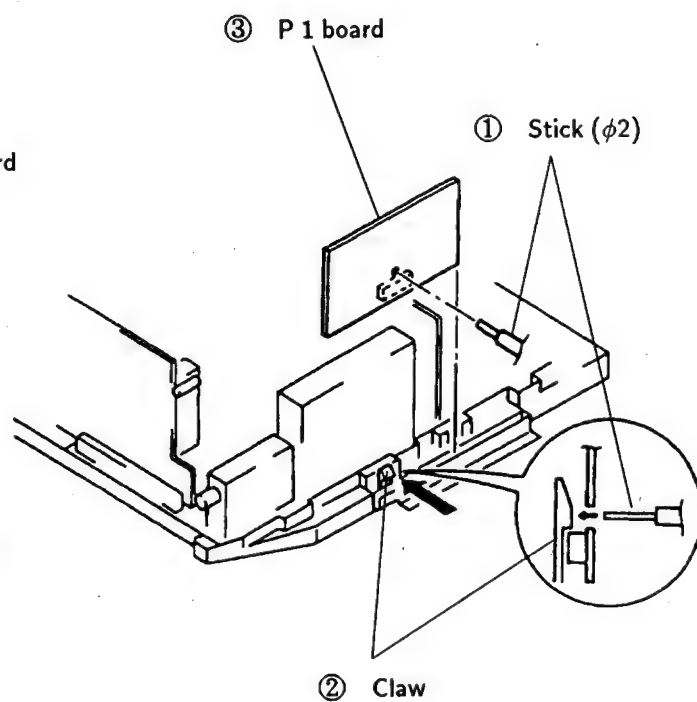


2-3. SERVICE POSITION



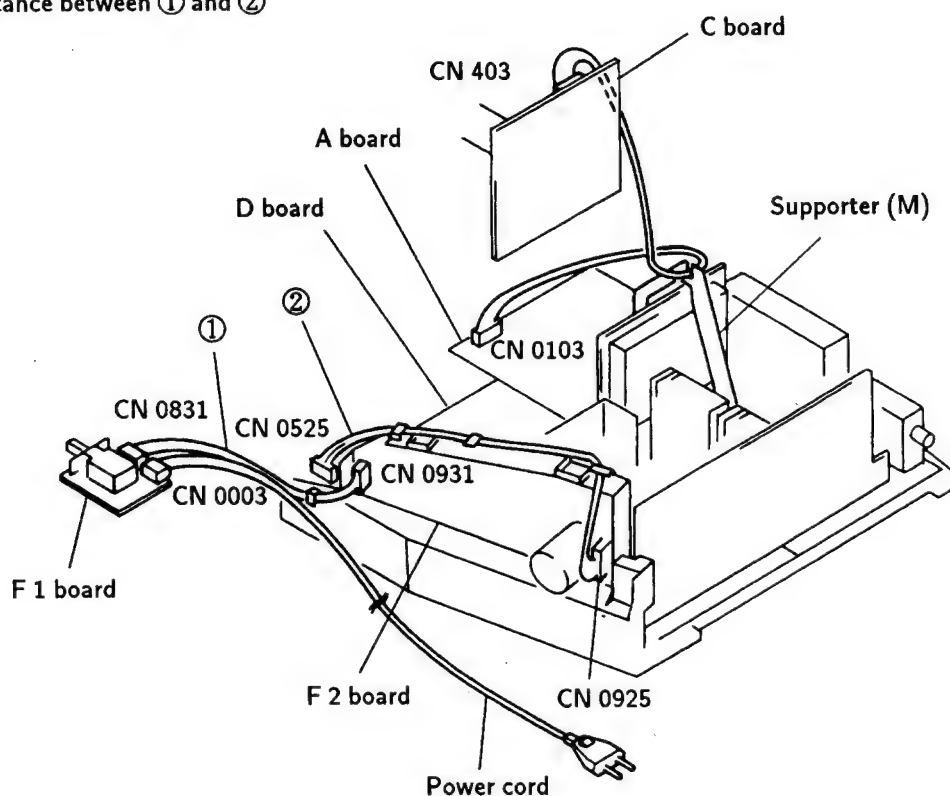
2-4. EXTENSION BOARD



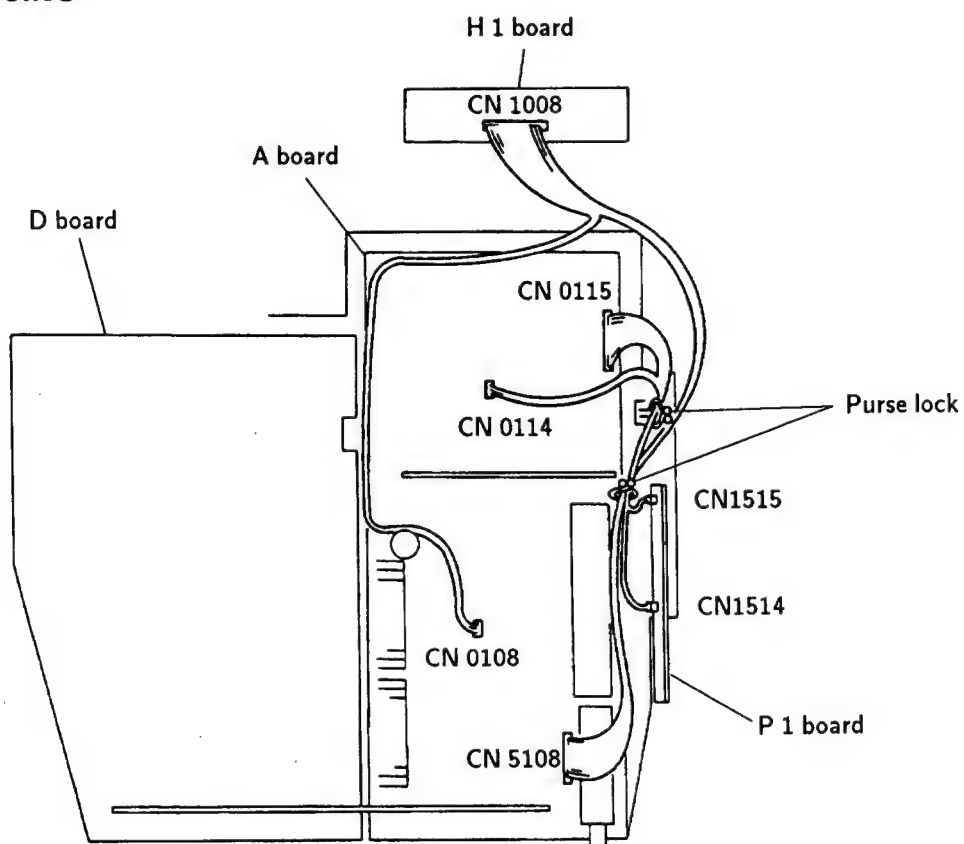
2-5. F BRACKET REMOVAL**2-6. J AND K BOARDS REMOVAL****2-7. P 1 BOARD REMOVAL**

2-8-1. WIRE DRESSING

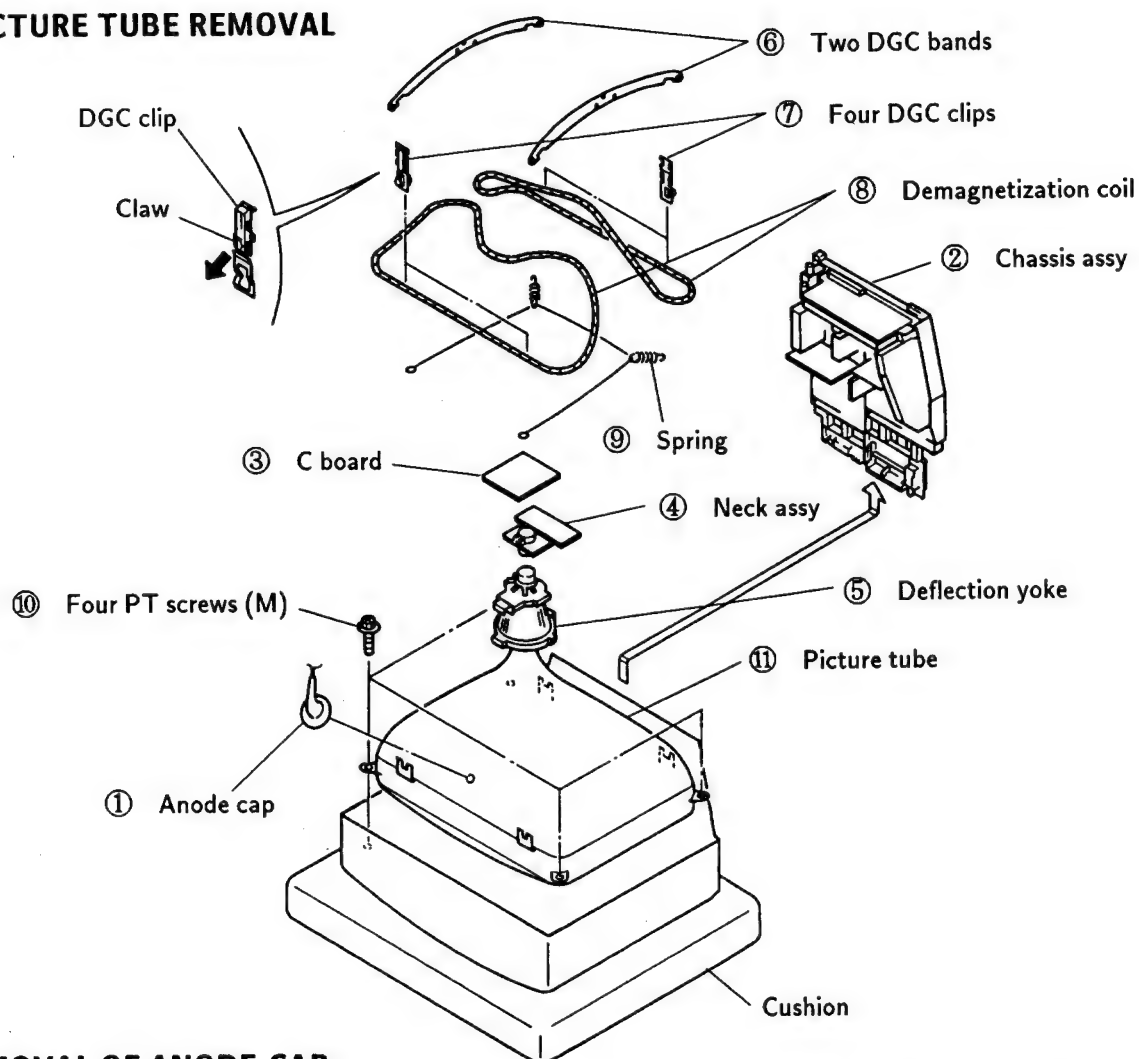
※ Keep distance between ① and ②



2-8-2. WIRE DRESSING



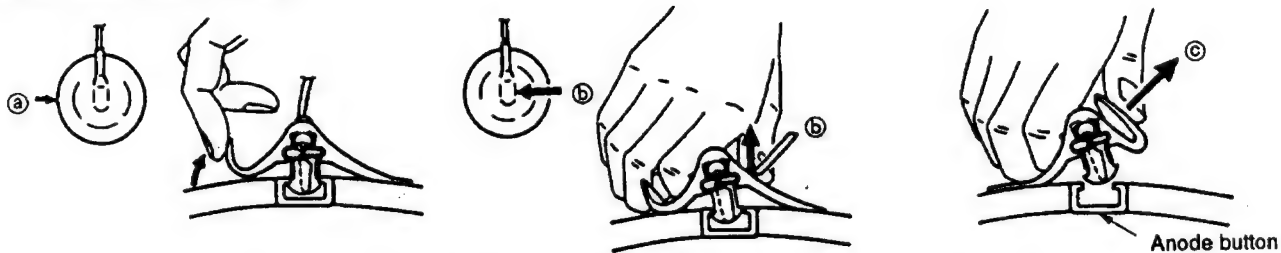
2-9. PICTURE TUBE REMOVAL



• REMOVAL OF ANODE-CAP

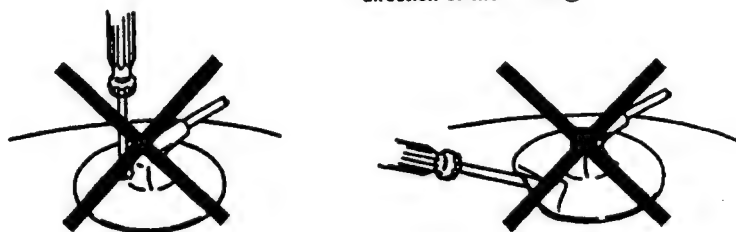
NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

• REMOVING PROCEDURES



• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardy not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardy!
The shatter-hook terminal will stick out or hurt the rubber.



SECTION 3

SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there is specific instruction to the contrary, carry out these adjustments with the rated power supply.
- Unless there is specific instruction to the contrary, set the controls and switches as this way:

1 Contrast 80%
 (or remote control normal)
 2 Brightness 50%

- Carry out the following adjustments in this order:
 1. Beam landing
 2. Convergence
 3. Focus
 4. White balance

Note: Testing equipment required.

1. Colour bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

Preparation:

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input a white signal with the pattern generator.
Contrast } normal
Brightness }
2. Position neck assy as shown in Fig. 3-2.
3. Set the pattern generator raster signal to red.
4. Move the deflection yoke to the rear and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each size. (see Fig. 3-1 - 3-3.)
5. Move the deflection yoke forward and adjust so that entire screen is red. (See Fig. 3-1.)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig. 3-4.)

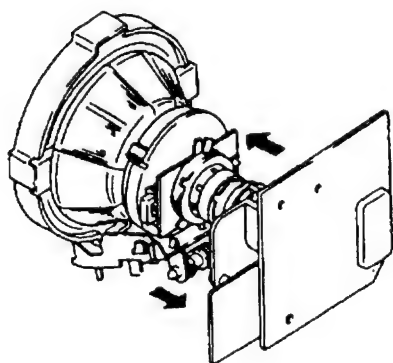


Fig. 3-1

Fig. 3-2

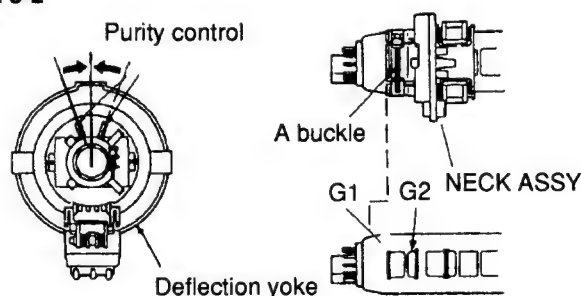


Fig. 3-3

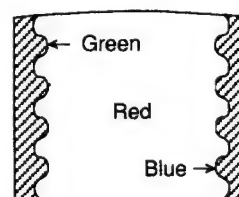
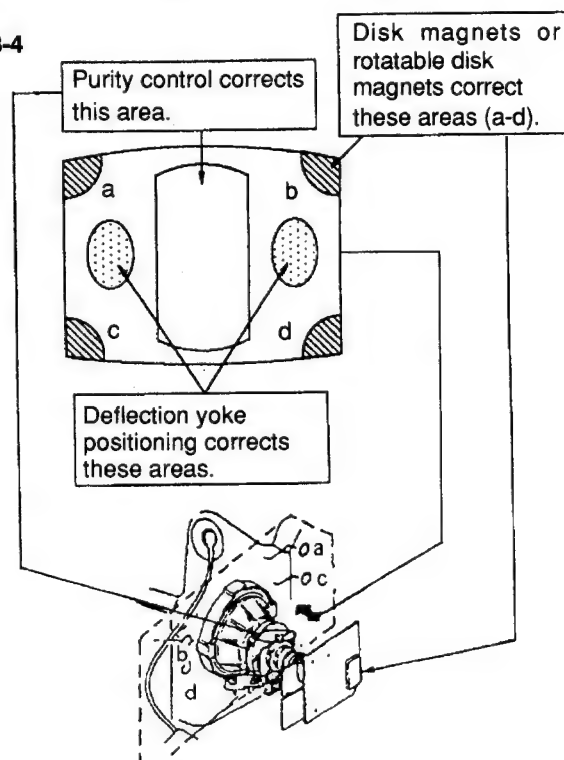


Fig. 3-4

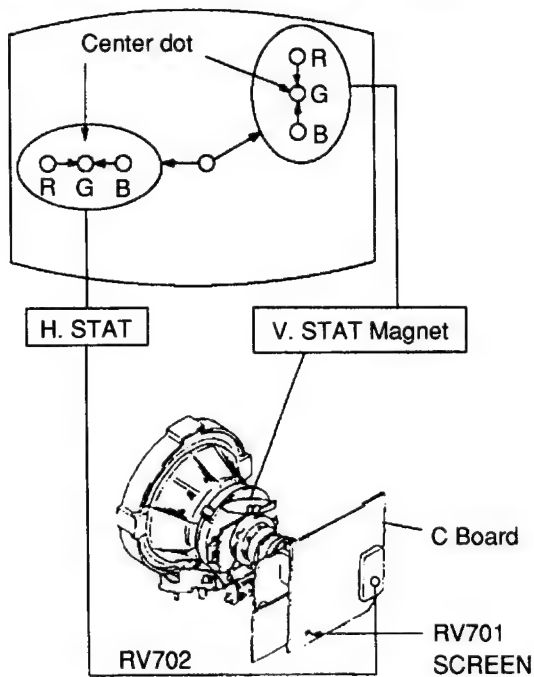


3-2. CONVERGENCE

Preparations:

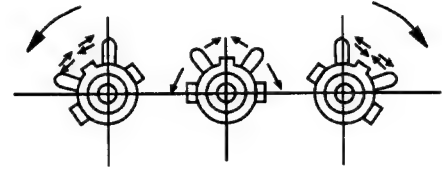
- Before starting this adjustment, adjust the focus, horizontal size and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

(1) Horizontal and vertical static convergence

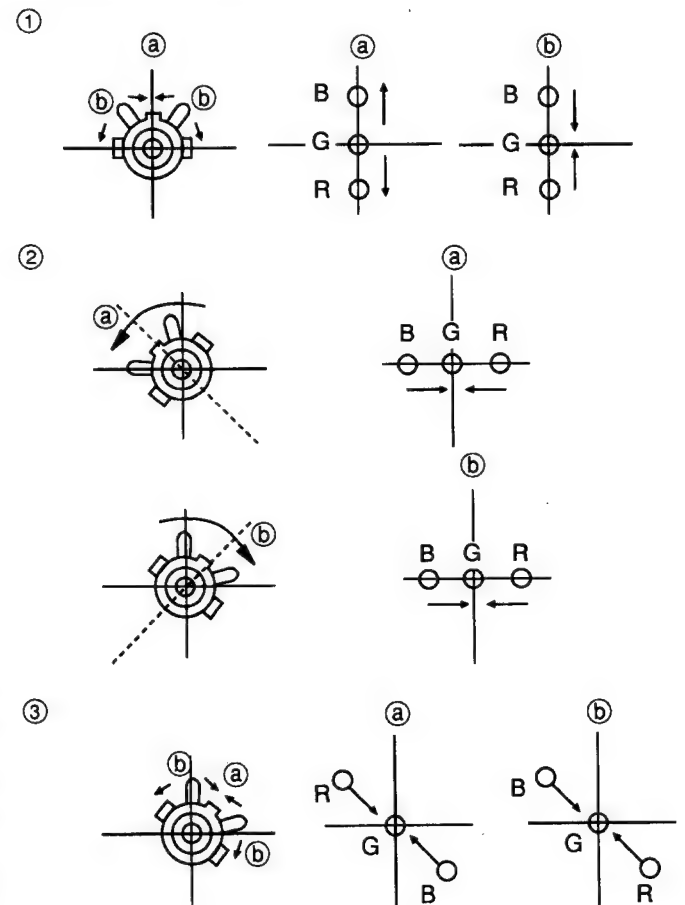


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

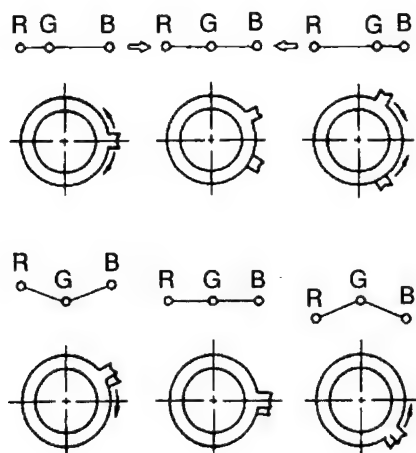
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



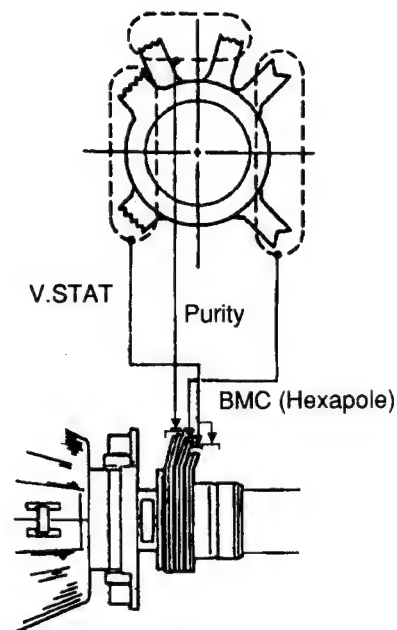
4. If the V.STAT magnet is moved in the direction of the (a) and (b) arrows, the red, green, and blue points move as shown below.



• Operation of BMC (Hexapole) Magnet



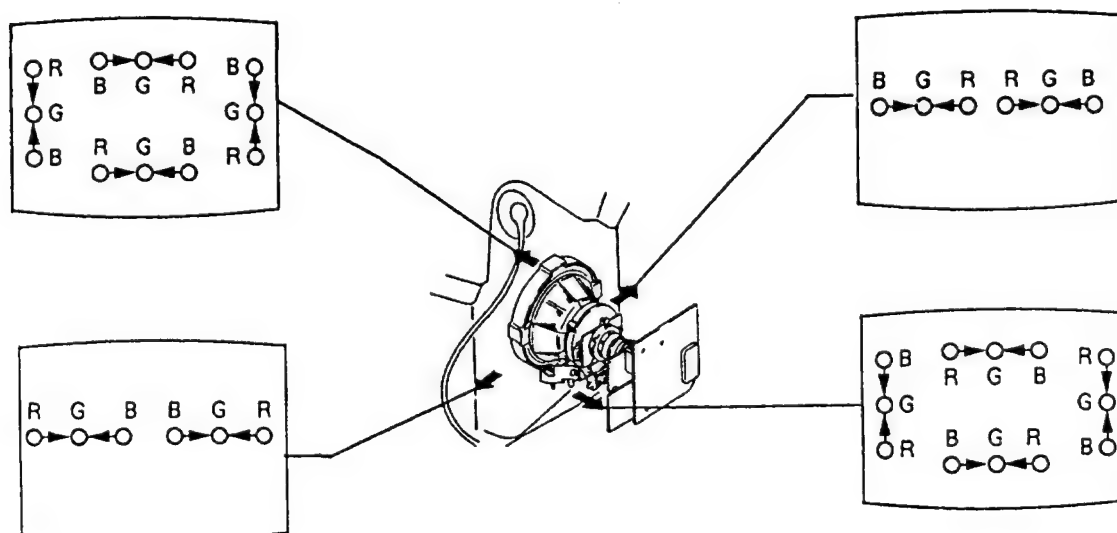
- The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking. Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).



(2) Dynamic Convergence Adjustment

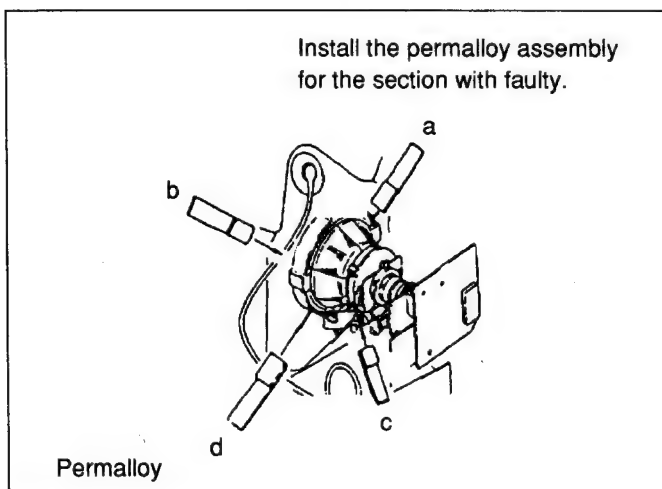
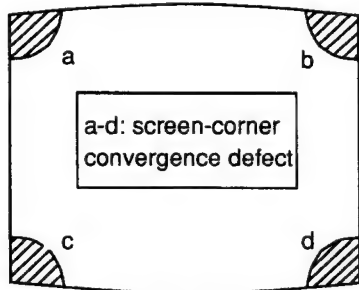
Preparations:

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
- Slightly loosen the deflection yoke screws.
- Remove the deflection yoke spacer.
- Move the deflection yoke as shown in the figure below and optimize the convergence.
- Tighten the deflection yoke screws.
- Install the deflection yoke spacer.



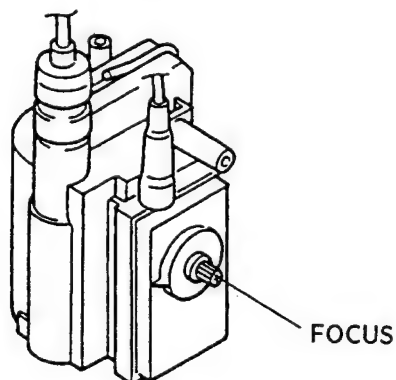
(3) Screen corner convergence

If you cannot adjust corner convergence properly, correct them with permalloy.



3-3. FOCUS

Adjust the focus to optimize the screen.



3-4. WHITE BALANCE

Screen G2 Setting

1. Input the dot signal from the pattern generator.
2. Set the picture brightness control to its lowest level.
3. Apply 180V DC to the R, G, and B cathodes with an external power supply.
4. While watching the picture, adjust G2 control RV701 (Screen) to the point just before the return lines disappear.

White balance adjustment

1. Receive all-white signal.
2. Enter into service mode. (Refer to the section 4 "Electrical Adjustment" to how to enter service mode.)
3. Select CXA1587 on menu.

Item No.	Adjustment item	Data amount
09	SUB BRIGHT	ADJ.
10	SUB HUE	7
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.
16	G-AUTO CUT OFF	ADJ.
17	B-AUTO CUT OFF	ADJ.
18	R-MANUAL CUT OFF	ADJ.
19	G-MANUAL CUT OFF	ADJ.
20	B-MANUAL CUT OFF	ADJ.

4. Set picture to MAX.
5. Adjust G-DRIVE B-DRIVE with buttons so that the white balance becomes optimum.
6. Press button to write the data for each item.
7. Set picture to MIN.
8. Adjust G-AUTO CUT OFF, B-AUTO CUT OFF, R-MANUAL CUT OFF, G-MANUAL CUT OFF and B-MANUAL CUT OFF with buttons so that the white balance becomes optimum.
9. Press button to write the data for each item.

SECTION 4

CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander, RM-831.

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set while pressing any two buttons on the front panel.

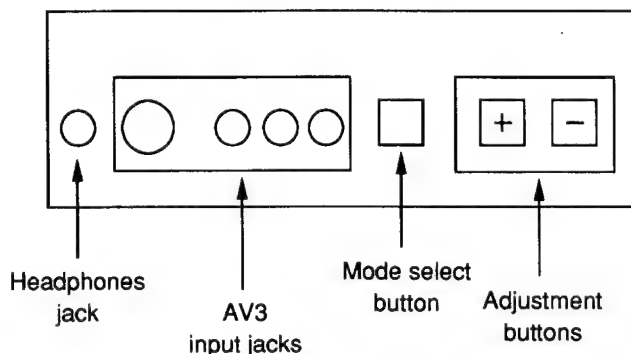


Fig. 4-1

2. "TT" will appear on the upper right corner of the screen.

Command operation in service mode

Item selection, data up/down

Menu indication

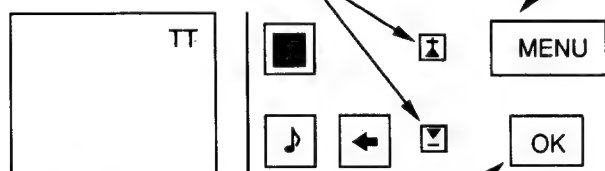


Fig. 4-2

Fig. 4-3

Selection completion,
data written-in

3. Press the **MENU** button of the commander to get the menu on screen.

MAIN MENU	
	Programme Table
	Video Connection
	Timer
	Preset
	Picture Control
	Sound Control
	Language
>	DEMO
Select < > and press OK	

Fig. 4-4

4. Press the **▲** and **▼** buttons of the commander and move > to DEMO.
5. Press **OK** button to proceed to the next menu.
6. The menu of fig. 4-5 will appear on screen. Select DEVICE corresponding to the adjustment item from the table on next page.

DEVICE	
	Initialize
>	CXA1587
	CXD2018Q
	TDA9145
	CXA1526
	TDA6612
	CX7948a
	PIP
	Megatext
Select < > and press OK	

Fig. 4-5

7. If adjustment item is CXA1587, press the **▼** button and move > to CXA1587.

CXA1587

Item No.	Adjustment item	Data amount
01	PICTURE	53
02	COLOUR	31
03	BRIGHT	31
04	HUE	31
05	SHARPNESS	7
06	RGB PICTURE	11
07	SUB CONTRAST	ADJ.
08	SUB COLOUR	ADJ.
> 09	SUB BRIGHT	ADJ.
10	SUB HUE	8
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.

8. Press **OK** button to get the next selection menu.
9. Press **▼** button and move > to the adjustment item and press **OK** button.
10. Press the **▲** and **▼** buttons to change the data in order to comply each standard.
11. Press **OK** button to write data.
12. Turn off the power to quit service mode when completing the adjustment.

CXA1587

Item No.	Adjustment item	Data amount
01	PICTURE	53
02	COLOUR	31
03	BRIGHT	31
04	HUE	31
05	SHARPNESS	7
06	RGB PICTURE	11
07	SUB CONTRAST	ADJ.
08	SUB COLOUR	ADJ.
09	SUB BRIGHT	ADJ.
10	SUB HUE	8
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.
16	G-AUTO CUT OFF	ADJ.
17	B-AUTO CUT OFF	ADJ.
18	R-MANUAL CUT OFF	ADJ.
19	G-MANUAL CUT OFF	ADJ.
20	B-MANUAL CUT OFF	ADJ.
21	GAMMA LEVEL	0
22	DC TRANSFER RATIO	3
23	DYNAMIC PICTURE	0
24	Y FILTER ADJ.	ADJ.
25	Y DELAY TIME	15
26	Y DELAY SWITCH 1	0
27	Y DELAY SWITCH 2	1
28	SHARPNESS LIMIT	ON
29	ALL BLK	OFF
30	H SHIFT	31
31	DAC TEST	ON
32	PRE/OVER SHOOT	12
33	SHARPNESS FO	2
34	SUB SHARPNESS	3
35	R MUTE	OFF
36	G MUTE	OFF
37	B MUTE	OFF
38	AGING 1	OFF
39	AGING 2	ON
40	AKB	ON
41	INHIBIT RGB	ON
42	FORCED RGB	OFF
43	V/2 V	OFF

Item No.	Adjustment item	Data amount
44	AXIS	PAL
45	HUE SW	OFF
46	V EXTENTION	OFF
47	AFC 1	1
48	AFC 2	0
49	AFC	OFF
50	REF. POSITION	0

CXD2018Q

Item No.	Adjustment item	Data amount
01	V SIZE	ADJ.
02	V SHIFT	ADJ.
03	S CORRECTION	ADJ.
04	V LINEARITY	ADJ.
05	H SIZE	ADJ.
06	PIN AMP	ADJ.
07	TILT	ADJ.
08	UPPER CORNER	ADJ.
09	LOWER CORNER	ADJ.
10	V BOW	ADJ.
11	ANGLE	ADJ.
12	HV COMP. V	12
13	HV COMP. H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAN	OFF
19	INTERLACE	ON
20	H SHIFT	32
21	N/S CORRECTION	ADJ.

Typical Value (OSD based) when receiving PAL Philips pattern.

TDA6612	ADJ.
Stereo-Separation	(30)

Should be adjusted twice 4:3 and 16:9 mode.

Y FILTER ADJUSTMENT

1. Input PAL RED pattern.
2. Connect an oscilloscope to CN0403 ① pin (R) on the C board.
3. Enter into service mode and press 3, 8.
4. Adjust data by Δ or ∇ to minimize the chroma element of CN 0403 ① pin.

SUB BRIGHTNESS ADJUSTMENT

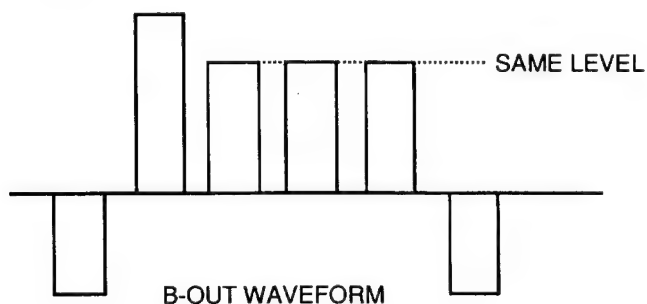
1. Input Phillips pattern.
2. Enter into service mode and press 23.
3. Adjust data so that 0-IRE of the grey scale and CUT-OFF 20-IRE glitter slightly.

SUB CONTRAST ADJUSTMENT

1. Input a video that contains small 100% area on the Black Back ground.
2. Enter into service mode and press 01 to have PIC max followed by 21.
3. Adjust data so that 2.5 Vp-p can be obtained at ① CN0403 (R).

SUB COLOUR ADJUSTMENT

1. Input PAL colour bar.
2. Connect an oscilloscope to CN0403 ③ pin (B) on the C board.
3. Enter into service mode and press 22 of CXA1587, 8 SUB COLOUR.
4. Adjust data so that the right sides of the waveform will be the same.

**STEREO-SEPARATION ADJUSTMENT**

1. Input 1 kHz stereo signal to the L-ch and 400Hz stereo signal to the R-ch.
2. Enter into service mode and press 19.
3. Adjust data so that sound does not leak to the R-ch and the L-ch.

DRIVE AND CUT OFF

See direct test mode list attached and refer to sub brightness or such for adjustment method.

BELL FILTER ADJUSTMENT (L3, L2)

1. Input PHILLIPS Signal.
2. Connect an oscilloscope to pin ⑮ of IC1 on the E2 board.
3. Adjust L3 (Bell Filter) to get a flat chroma/smooth signal. (Photo ① for reference)
4. Connect an oscilloscope to pin ② of IC1 on the E2 board.
5. Adjust L2 (B - Y) to get symmetrical transient between (R - Y) \rightarrow (B - Y) and (B - Y) \rightarrow (R - Y). (Photo ② for reference)
6. Connect pin ⑤ of CN2.
7. Confirm ID flip-flop output signal as below.

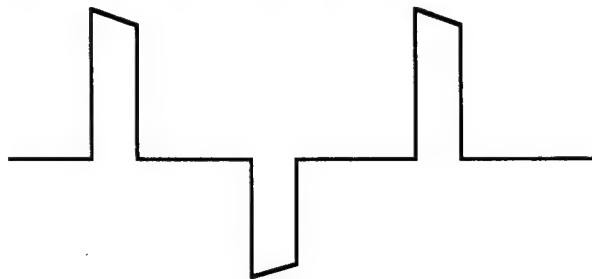
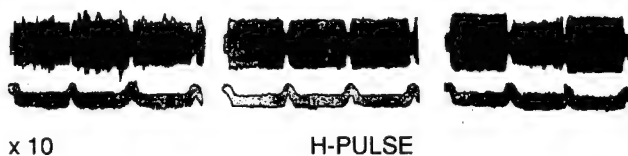


PHOTO ① BELL FILTER ADJUSTMENT (L3)

< MONITOR PIN ⑮ of IC1 Connect



x 10

H-PULSE

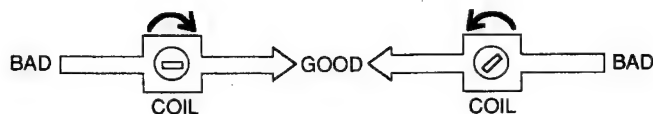


PHOTO ② COL BALANCE ADJUSTMENT (L2)

< MONITOR PIN ② of IC1 Connect



x 10

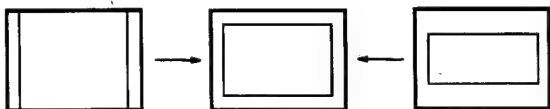
H-PULSE

DEFLECTION SYSTEM ADJUSTMENT

1. Enter into service mode and select CXD2018Q.
2. Select and adjust each item in order to get an optimum image.

Item No.	Adjustment item	Data amount
01	V SIZE	ADJ.
02	V SHIFT	ADJ.
03	S CORRECTION	ADJ.
04	V LINEARITY	ADJ.
05	H SIZE	ADJ.
06	PIN AMP	ADJ.
07	TILT	ADJ.
08	UPPER CORNER	ADJ.
09	LOWER CORNER	ADJ.
10	V BOW	ADJ.
11	ANGLE	ADJ.
12	HV COMP. V	12
13	HV COMP. H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAN	OFF
19	NON INTERLACE	ON
20	H SHIFT	31
21	N/S CORRECTION	ADJ.

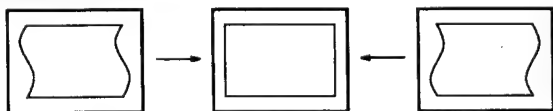
V SIZE



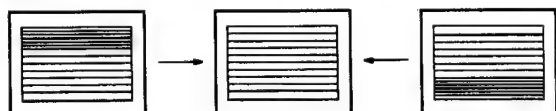
V SHIFT



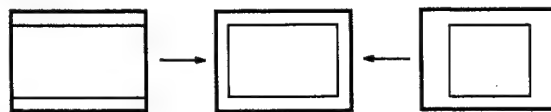
S CORRECTION



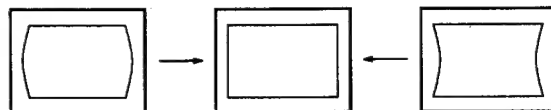
V LINEARITY



H SIZE



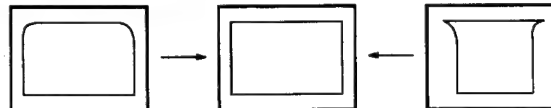
PIN AMP



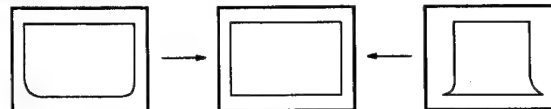
TILT



UPPER CORNER PIN



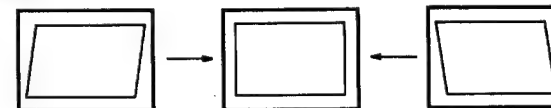
LOWER CORNER PIN



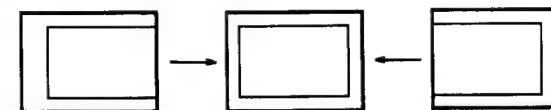
V BOW



ANGLE



H SHIFT



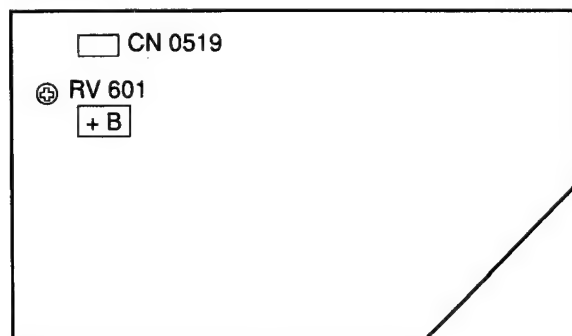
3. Press **OK** button to write the data.

If menu display may disturb the adjustment press **OK** to clear, to resume it, press **OK** again.

4-2. VOLUME ELECTRICAL ADJUSTMENTS

+ B (+135 V) ADJUSTMENT (RV 601)

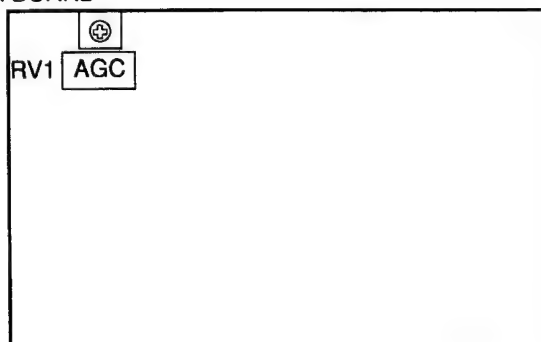
D BOARD



1. Turn on the power of the TV set.
2. Connect a digital multi-meter to ① pin of CN 0519 on D board.
3. Adjust RV601 on D board to + 135V.

AGC ADJUSTMENT (IF BLOCK)

A BOARD



1. Receive off-air signal.
2. Adjust AGC RV1 so that there is no snow noise and cross-modulation.
3. Change receiving channel and confirm status.

4-3. TEST MODE 2:

Is available by pressing Test button twice, OSD "TT" appears. The functions described bellow are available by pressing the two numbers. To release the Test Mode 2, press twice 0, 10, 20 ... or switch TV in Standby Mode.

00	Switch Test Mode 2 off
01	Picture maximum
02	Picture minimum
03	Volume to 35%
04	Volume to 50%
05	Volume to 65%
06	Volume to 80%
07	Aging Condition (Volume min., Picture max., Brightness max., Aging 2 Mode of CXA1587.
08	Shipping Condition (Analog values are reset due to factory setting, Prog. 1 is selected, AV IN = AV1, AV OUT = TV, Volume/HP Volume = 35%, Resolution = High, Format = 4.3, PIP Pos = Top Left, PIP = OFF, TT Mode is switched off.
09	Store in the language byte OFFH. The language menu appears automatically after power on.
10	Tenth entry is deleted.
11	Balance.
12	Hue.
13	Display model overview (Destination, text mode and so on.)
14	Enable direct N/S correction adjustment by ▼ ▲.
15	Read factory setting from ROM. Read Volume, Balance, Treble, Bass, Brightness, Contrast, Hue, Sharpness, NA Doclour values from ROM to the actual used values. (Lost power memory).
16	Save actual used values as reset values. Memorize actual used Values Balance, Treble, Bass, Hue, Sharpness, Contrast, Colour, Brightness at reset position in EEPROM.
17	Preset label for AV sources.
18	Text ON/OFF (Toggle function).
19	Stereo separation.
20	Tenth entry is deleted.
21	Sub Contrast
22	Sub Colour
23	Sub Brightness
24	Double text mode enable 3 disable (Toggle function).
25	Dummy

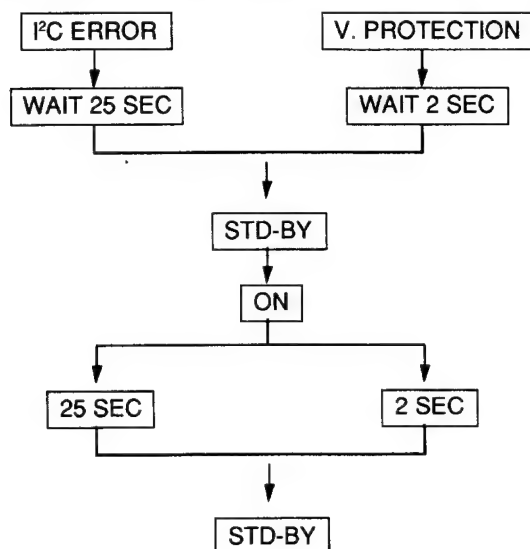
26	West Europe (National Character set for Teletext.)
27	East Europe (National Character set for Teletext.)
28	West Europe (US) (National Character set for Teletext.)
29	West Europe (TURK) (National Character set for Teletext.)
30	Tenth entry is deleted.
31	Green Drive
32	Blue Drive
33	Green Cut Off (Auto Cut Off.)
34	Blue Cut Off (Auto Cut Off.)
35	Red Cut Off (Manual Cut Off.) (Auto Cut Off is switched off.)
36	Green Cut Off (Manual Cut Off.) (Auto Cut Off is switched off.)
37	Blue Cut Off (Manual Cut Off is switched off.)
38	Y-Filter adjustment (Trap is switched off and TDA9145 is switched in forced NTSC mode.)
39	Dummy
40	Tenth entry is deleted.
41	Default setting of CXA1587. (Only in prog. 99 available.)
42	Default setting of CXD2018Q. (Only in prog. 99 available.)
43	Default setting of CXA1526. (Only in prog. 99 available.)
44-46	Dummy
47	PIP in text: Position horizontal.
48	PIP in text: Position vertical.
49	Erase the EEPROM testbyte (This byte detects already stored NMV's) and preset by U controller. (Not the channel date.)

Note: For No. 35, 36, 37 and 38 special presetting (AKB, forced Colour Mode, Trap) is selected.
After selecting a new Test Mode Number, the AKB is switched ON, the Trap is switched On and TDA9145 is switched to Auto Search Mode.

4-4. ERROR MESSAGE

Self diagnosis system can operates as follows.

- When MP can't get the acknowledge back from the device, LED starts flashing according to the table as attached.



In case of more errors in parallel, the blinking error shows max. Priority according to the error number (e.g. error 2 and error 5 appears together, then LEDs shows error 2).

TABLE OF ERRORS

Error Count	Switch off time	IC TYPE	FUNCTION
1	20 sec.	II C BUS	SDA low
	RESET	24C16	EEPROM
3	20 sec.	SDA3202	Tuner PII
4	20 sec.	TDA9145	Colour decoder
5	20 sec.	CXA1587	RGB/Jungle
6	20 sec.	TDA6612	Sound processor
7	20 sec.	CXD2018Q	V deflection
8	20 sec.	CXA1545	AV switch
13	1 sec.		V protection

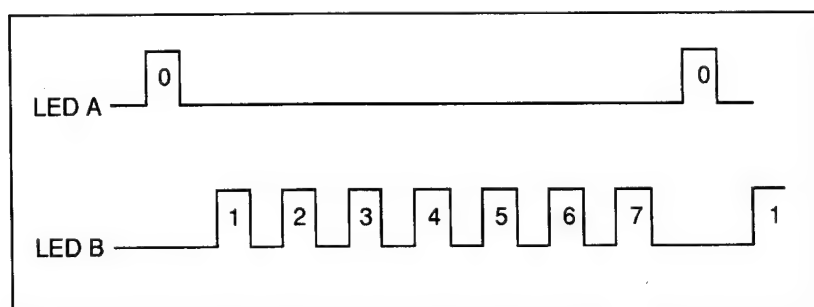
Stand by LED blinking

No IK return

4-5. ERROR II C BUS DIAGNOSIS SYSTEM IN AE-2B CHASSIS

For all ICs in AE- 2B chassis which are necessary to get picture and sound there is a built in error I²C Bus diagnosis system.

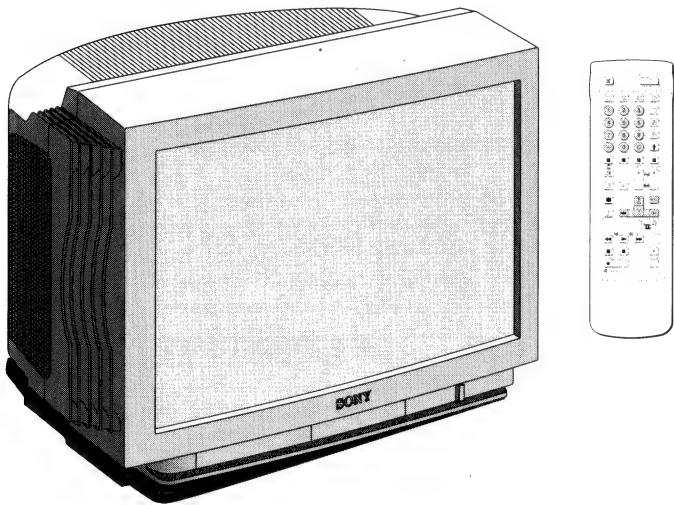
In case of no acknowledge bit, LED A and LED B starts blinking as shown.



SERVICE MANUAL

AE-2B CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-A2941A	RM-831	Italian	SCC-G59H-A	KV-A2943E	RM-831	Spanish	SCC-G56H-A
KV-A2941B	RM-831	French	SCC-G57H-A	KV-A2941K	RM-831	OIRT	SCC-G73H-A
KV-A2941D	RM-831	AEP	SCC-G45J-A	KV-A2942U	RM-831	UK	SCC-G55F-A



TRINITRON® COLOR TV

SONY®

ITEM MODEL	Television System	Stereo System	Channel Coverage	Color System
Italian	B/G/H, D/K	GERMAN Stereo	ITALIA VHF:A-H2 (C) UHF: 21-69 PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
French	B/G/H, D/K L, I	GERMAN Stereo French Nicam	L VHF:F02-F10 UHF:F21-F60 CABLE:B-Q B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 I UHF:B21-B69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
AEP	B/G/H, D/K	GERMAN Stereo	PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
Spanish	B/G/H, D/K	GERMAN/NICAM Stereo	PAL B/G VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
OIRT	B/G/H, D/K	GERMAN Stereo	B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
UK	I	NICAM Stereo	UHF : B21-B69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)

MODEL	Italian	French	AEP	Spanish	OIRT	UK
Power Consumption	119W	132W	137Wh	140Wh	137Wh	193W

SPECIFICATIONS

Picture Tube Super Trinitron
Approx. 72 cm (29 inches)
(Approx. 68 cm picture measured diagonally)
110° -deflection

Input/Output Terminals

[REAR]

- Ⓐ 1 21-pin Euro connector (CENELEC standard)
 - inputs for audio and video signals
 - inputs for RGB
 - outputs of TV video and audio signals
- Ⓐ 2/Ⓐ 3 2 21-pin Euro connector
 - inputs for audio and video signals
 - inputs for S video
 - outputs for audio and video signals (selectable)
- Ⓐ Audio outputs (variable) - phono jacks
 - Ext Left/Right speaker terminals.
 - Center and Surround speaker terminals.

[FRONT]

- Ⓐ 3 Video input - phono jack
- Ⓐ Audio inputs - phono jacks
- Ⓐ 3 S video input 4-pin DIN
- Ω Headphone jacks : stereo minijack

Sound output 3 x 15W RMS (LRC)
2 x 30W Music Power (LRC)
2 x 4W RMS (S)
2 x 15W Music Power (S)

Power requirements 220 - 240V

Dimensions Approx. 762x557x546 mm

Weight Approx. 55kg

Supplied accessories RM-831 Remote Commander (1)
IEC designation R6 battery (1)
Center Speaker (1)
Surround Speakers (2)
NICAM , FASTEXT.

Other features

[RM-831]

Remote control system Infrared control

Power requirements 1.5V dc
1 battery IEC designation R6 (size AA)


Dimensions Approx. 65x225x21 mm (w/h/d)

Weight Approx. 157g (Not including batteries)

Design and specifications are subject to change without notice.

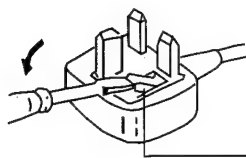
Model name Item	KV-A2941A	KV-A2941B	KV-A2941D	KV-A2943E	KV-A2941K	KV-A2942U
Pal Comb	OFF	OFF	OFF	OFF	OFF	OFF
PIP	OFF	OFF	OFF	OFF	OFF	OFF
RGB Priority	ON	ON	OFF	OFF	OFF	OFF
Graphic Equalizer	ON	ON	ON	ON	ON	ON
Dolby	ON	ON	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON	ON
Dyn. Convergence	OFF	OFF	OFF	OFF	OFF	OFF
Projector	OFF	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	ON	ON	ON	ON	ON	ON
Norm B/G	ON	ON	ON	ON	ON	OFF
Norm I	OFF	ON	OFF	OFF	OFF	ON
Norm D/K	ON	ON	ON	ON	ON	OFF
Norm AUS	OFF	OFF	OFF	OFF	OFF	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF	OFF	OFF
Norm M	OFF	OFF	OFF	OFF	OFF	OFF
Language Preset	Italiano	Francais	Deutsch	None	OIRT	English

WARNING (KV-A2942U only)

The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the  mark.

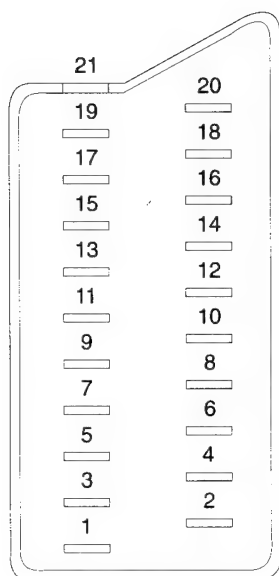
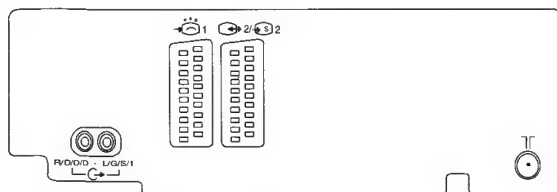
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME. IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.

When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.
Open the fuse compartment with the screwdriver blade and replace the fuse.

21 pin connector (1 2 4)



Pin No.	1	2	4	Signal	Signal level
1	○	○	○	Audio output B (right)	Standard level : 0.5V rms Output impedance : Less than 1kohm*
2	○	○	○	Audio input B (right)	Standard level : 0.5V rms Output impedance : More than 10kohm*
3	○	○	○	Audio output A (left)	Standard level : 0.5V rms Output impedance : Less than 1kohm*
4	○	○	○	Ground (audio)	
5	○	○	○	Ground (blue)	
6	○	○	○	Audio input A (left)	Standard level : 0.5V rms Output impedance : More than 10kohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More than 10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (green)	
10	○	○	○	Open	
11	○	●	●	Green	Green signal : 0.7 ± 3dB, 75 ohms, positive
12	○	○	○	Open	
13	○	○	○	Ground (red)	
14	○	○	○	Ground (blanking)	
15	○	—	—	Red input	0.7 ± 3dB, 75 ohms, positive
16	○	○	○	(S signal) chroma input	0.3 ± 3dB, 75 ohms, positive
17	○	○	○	Blanking input (Y's signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75ohms
18	○	○	○	Ground (video output)	
19	○	○	○	Ground (video input)	
20	○	—	—	Video output	1V ± 3dB, 75ohms, positive sync: 0.3V (-3/+10dB)
21	○	○	○	Video input Y (S signal)	1V ± 3dB, 75ohms, positive sync: 0.3V (-3/+10dB)
21	○	○	○	Common ground (plug, shield)	

○ Connected ● Not Connected (open) * at 20Hz - 20kHz

Pin No	Signal	Signal level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm , positive Sync. 0.3V -3/+10 dB
4	C (S signal) input	0.3V ± 3dB 75 ohm , positive Sync.

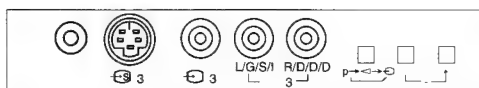


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CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVAL OF THE ANODE CAP.

WARNING !!

AN ISOLATING TRANSFORMER SHOULD BE USED DURING ANY SERVICE WORK TO AVOID POSSIBLE SHOCK HAZARD, DUE TO A LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARKED  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLIMENTS PUBLISHED BY SONY.


ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISE LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDE À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ !!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE  SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÉCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT, NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

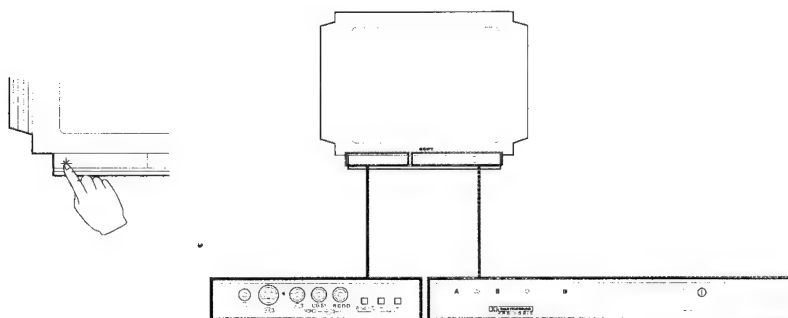
Overview

SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

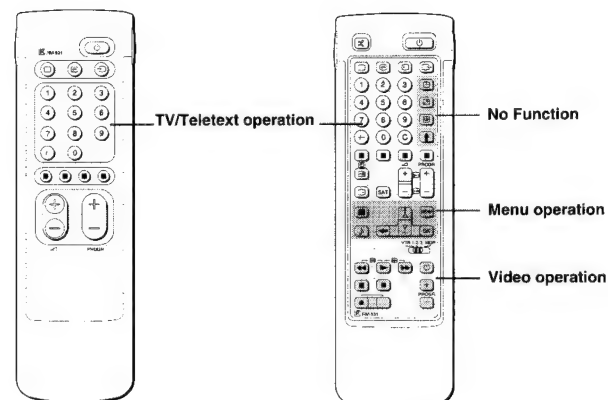
This section briefly describes the buttons and controls on the TV set and on the Remote Commander. For more information, refer to the pages given next to each description.

TV set - front



Symbol	Name	Refer to page
⓪	Main power switch	42
⓪	Standby indicator	42
A-CD-B	Stereo A/B indicators	44
Ω	Headphones jack	50
⓪ 3, 3 3	Input jacks (S-video/video/audio)	50
P-A-C	Function selector (Programme/volume/input)	42
← →	Adjustment buttons for function selector	42

Remote Commander RM-831



Note
The SAT button does not operate with this TV.

Simple side

Full-Function side

TV/Teletext operation

Symbol	Name	Refer to Page
⓪	Mute on/off button	43
⓪	Standby button	42
⓪	TV power on/TV mode selector button	42
⓪	Teletext button	43
⓪	Input mode selector	43
⓪	Output mode selector	51
1, 2, 3, 4, 5, 6, 7, 8, 9, and 0	Number buttons	42
—/—	Double-digit entering button	42
C	Direct channel entering button	39
Δ+/-	Volume control button	42
PROGR +/-	Programme selectors	42
⓪	Teletext page access buttons	47
⓪	Picture adjustment button	44
⓪	Sound adjustment button	44
⓪	On-screen display button	43
⓪	Teletext hold button	47
⓪	Time display button	43
⓪	Fastext buttons	47

Menu operation

Symbol	Name	Refer to Page
MENU	Menu on / off button	36
Δ+/-	Select buttons	36
OK	OK (confirming) button	36
←	Back button	36

Video operation

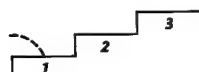
Symbol	Name	Refer to Page
VTR 1/2/3	Video equipment selector	52
MDP		
⓪	Video equipment operation buttons	52
PROGR +/-		

Getting Started

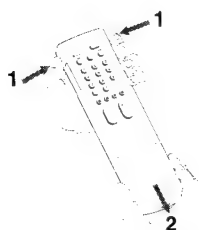


Note: Connect the speakers using the leads provided making sure to observe the following polarity:-
The striped lead is (+) and should be connected to the red terminal on the speaker.
The black lead is (-) and should be connected to the black terminal on the speaker.
Note: If you don't connect the centre speaker, set the "Centre Mode" to "Phantom". For details, refer to page 46.

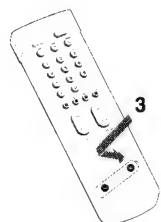
Step 1 Preparation



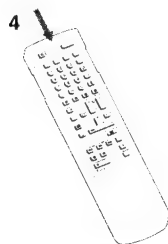
Insert the battery into the Remote Commander



Remove the cover.

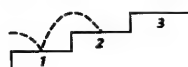


Check the correct polarity.



Refit the outside cover making sure that the Full-Function side is visible to use the menu in Step 3.

Step 2 Connection



1 Connect the aerial



Fit an IEC aerial connector attached to 75-ohm coaxial cable (not supplied) to the "I" socket at the rear of the TV.

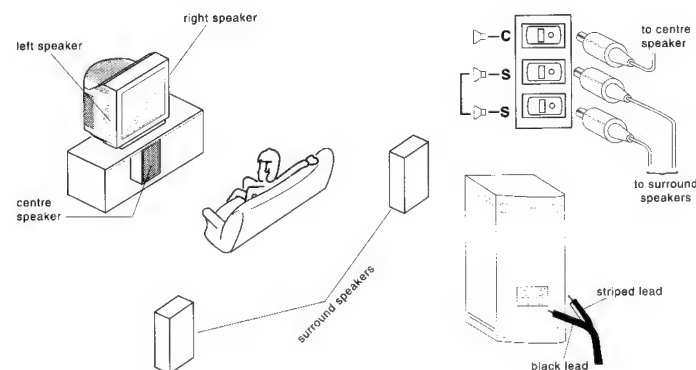
2 Connecting the speakers

Dolby Pro Logic (*) Surround requires normally 5 speakers, whose functions are as follows:
Centre speaker: to anchor the stable sound image, like dialogue, to the TV screen.
Left and Right front speakers: for the normal two-channel stereo broadcasts.
Surround speakers: for the special effects created by the surround channel.

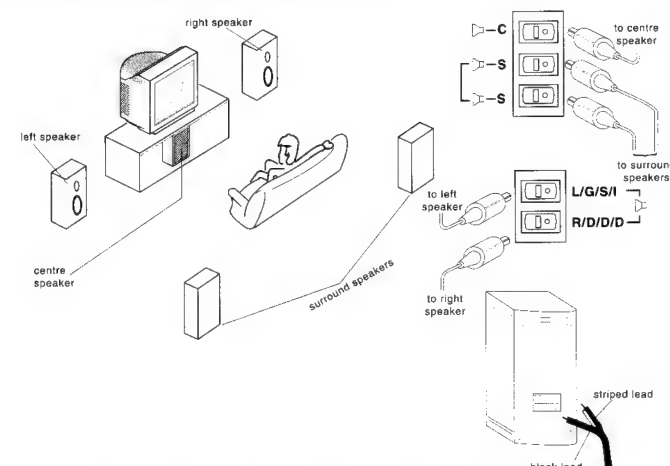
To obtain the full benefit of your Dolby Pro Logic Surround TV, the speakers should be positioned as shown below:

Before switching on: connect the speakers to the TV set.

a. Connect the speakers provided only:-

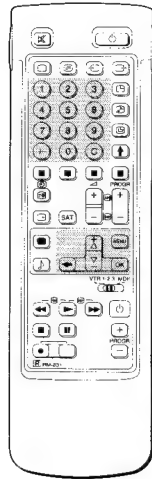
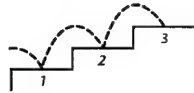


b. Connect your own speakers:-



(*) Manufactured under license from Dolby Laboratories Licensing Corporation. DOLBY and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Step 3 Tuning in to TV Stations



To go back to main menu:
Keep pressing **EXIT**.

To go back to the normal TV picture:
Press **MENU**. Normal TV picture will be restored after one minute if menu functions are not selected.

Note on the Demo function:
If you choose Demo on the main menu, you can see a demonstration of the menu functions. Press **MENU** to stop the function.

Once you have set up the TV, you can choose the language of the menu. Then you should preset the channels (up to 60 channels) by choosing either the automatic or manual method.

The automatic method is easier if you want to preset all receivable channels at once. Use the manual method if you only have a few channels and want to preset channels one by one. The manual method is also convenient for allocating programme numbers to various video input sources.

Before you begin

- Check that the Full-Function side of the Remote Commander is visible.
- Locate Menu operation buttons on the Remote Commander. They are shaded in the illustration at the left.

1 Choose a language

- Depress **OK** on the TV.
The TV will switch on. If the standby indicator on the TV is lit, press **OK** or a number button on the Remote Commander.
- Press the **MENU** button.
The **LANGUAGE** menu appears. (See Fig. 1)
- Select the language you want with **Δ** or **▽**, and then press **OK**.



Fig. 1.



Fig. 2.

2 Display the Menu

Press the **EXIT** button.
The main menu appears. (See Fig. 2)

Now, choose one of the methods described overleaf:
"Preset Channels Automatically"
or
"Preset Channels Manually".

With this method, you can preset all receivable channels at once.

To stop automatic channel presetting:
Press **EXIT** on the Remote Commander.

Notes:

- After presetting the channels automatically, you can check which channels are stored on which programme positions. For details, see "Using the Programme Table" on page 43.

- You can sort the programme positions to have them appear on screen in the order you like. For details, see "Sorting Programme Positions" on page 39.

- Programme names are automatically taken from Teletext if available. If not please refer to page 40 "Captioning a station name" for further information.

Use this method if there are only a few channels in your area to preset or if you want to preset channels one by one. You may also allocate programme numbers to various video input sources.

If you have made a mistake:
Press **EXIT** to go back to the previous position.
To go back to main menu
Keep pressing **EXIT**.

To go back to the normal TV picture
Press **MENU**.

To tune in a channel by frequency:
After selecting **F** in step 5, enter three digits using the number buttons.
Press **OK**.

3 Preset channels automatically

- Select **Preset** with **Δ** or **▽** and press **OK**.
The **PRESET** menu appears. (See Fig. 3.)
- Select **Auto Programme** with **Δ** or **▽** and press **OK**.
The **AUTO PROGRAMME** menu appears. (See Fig. 4.)
- Press **OK**.
Select if necessary the TV broadcast system with **Δ** or **▽** and press **OK**. (B/G for western European countries, D/K for eastern European countries) The first element of the "PROG" number will be highlighted.
- Select the programme (number button) from which you want to start presetting. Select the first element of the double-digit number with **Δ** or **▽** and press **OK** or select with the number buttons (e.g. For "04", select "0" here). The second element of "PROG" is highlighted.
- Select the second element of the double-digit number with **Δ** or **▽** or the number buttons (e.g. For "04", select "4" here) (See Fig. 5.) and press **OK**.
- Select "C" or "S" with **Δ** or **▽** and press **OK**. The automatic channel presetting starts.

When presetting is finished, the preset menu reappears. All available channels are now stored on successive number buttons. (Press **MENU** to restore normal TV picture).

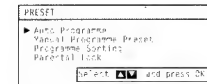


Fig. 3.



Fig. 4.



Fig. 5.

3 Preset channels manually

- Select **Preset** with **Δ** or **▽** and press **OK**.
The **PRESET** menu appears. (See Fig. 6.)
- Select **Manual Programme Preset** with **Δ** or **▽** and press **OK**.
The **MANUAL PROGRAMME PRESET** menu appears. (See Fig. 7.)
- Using **Δ** or **▽**, select the programme position (number button) to which you want to preset a channel, and press **OK**.
Keep pressing **▽** to select programme numbers higher than 10.
- Select if necessary the TV broadcast system (B/G for western European countries, D/K for eastern European countries) or a video input source (EXT) with **Δ** or **▽**. Then press **OK**. The CH position will be highlighted. (See Fig. 8.)
- Using **Δ** or **▽**, select **C** (to preset a regular channel), or **F** (to tune in by frequency), or **S** (cable channel) and press **OK**. The first element of the "CH" number is highlighted. If you have selected **EXT** in step 4, select the video input source with **Δ** or **▽**. (See Fig. 9.)

There are two ways to preset channels. If you know the channel number, go to step "6-Manual",
or
if you don't know the channel number, go to step "6-Search".



Fig. 6.

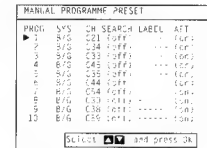


Fig. 7.



Fig. 8.



Fig. 9.

If you have made a mistake:
Press \leftarrow to go back to the previous position.
To go back to main menu
Keep pressing \leftarrow .
To go back to the normal TV picture
Press MENU.

6 Manual

- a Select the first element of the "CH" number with Δ / ∇ - and press OK or select with the number buttons. The second element of the "CH" number is highlighted.
- b Select the second element of the number with Δ / ∇ - or the number buttons. The selected number appears. (See Fig. 10.)
- c Press OK
The "SEARCH" position is highlighted and the selected channel is now stored. (See Fig. 11.)
- d Press OK until the cursor appears by the next programme position.
- e Repeat steps 3 to 6 to preset other channels.



Fig. 10.



Fig. 11.

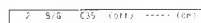


Fig. 12.



Fig. 13.

6 Search

- a Press OK repeatedly until the colour of the SEARCH position changes.
- b Start searching for the channel with Δ (up) or ∇ (down). The CH position changes colour. (See Fig. 12.) The CH number starts counting up or downwards. When a channel is found, it stops. (See Fig. 13.)
- c Press OK if you want to store this channel. If not, press Δ or ∇ - to continue channel searching.
- d Press OK until the cursor appears by the next programme position.
- e Repeat steps 3 to 6 to preset other channels.

4 Presetting Dolby Pro Logic

To adjust the individual speaker level:
see page 46.

- To enjoy the programmes encoded in Dolby Surround, preset the Digital Surround mode to Dolby Pro Logic.
- 1 Press \mathbb{J} on the Remote Commander.
The SOUND CONTROL menu appears (Fig. 14).
- 2 Using Δ or ∇ - select Digital Surround then press OK. The current mode appears.
- 3 Using Δ or ∇ - select Dolby Pro Logic then Press OK. The Surround mode is set to Dolby Pro Logic.
- 4 Press MENU to return to the normal screen.

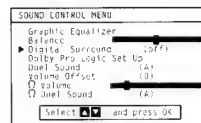
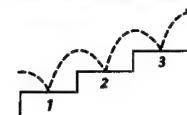


Fig. 14.

Additional Presetting Functions



This section shows you additional presetting functions such as sorting or skipping programme positions, captioning a station name, manual fine-tuning, and using the parental lock.

Before you begin

- Check that the Full Function side of the Remote Commander is visible
- Locate the Menu operation buttons.

Sorting Programme Positions

With this function, you can sort the programme positions to a preferable order.

- 1 Press MENU to display the main menu.
- 2 Select Preset with Δ or ∇ - and press OK. The PRESET menu appears.
- 3 Select Programme Sorting with Δ or ∇ - and press OK. The PROGRAMME SORTING menu appears. (See Fig. 15.)
- 4 Using Δ or ∇ -, select the programme position you want to move to another programme position and press OK. The colour of the selected position changes. (See Fig. 16.)
- 5 Using Δ or ∇ -, select the programme position to which you want to move the selected programme and press OK. Now the two programme positions have been sorted. (See Fig. 17.)
- 6 Repeat steps 4 and 5 to exchange other programme positions.

PRG	CH	LABEL	PRG	CH	LABEL
0	AV1	VHS	8	C29	ITV
1			9	C35	C4
2	C52	BBC1	10	C07	
3	T51	BBC2	11	C07	
4			12	C02	
5	VIDEO	BHM	13	C02	
6	C02		14	C02	
7	C02		15	C02	

Fig. 15.

PRG	CH	LABEL	PRG	CH	LABEL
0	AV1	VHS	8	C29	ITV
1			9	C35	C4
2	C52	BBC1	10	C07	
3	T51	BBC2	11	C07	
4			12	C02	
5	VIDEO	BHM	13	C02	
6	C02		14	C02	
7	C02		15	C02	

Fig. 16.

PRG	CH	LABEL	PRG	CH	LABEL
0	AV1	VHS	8	C07	
1			9	C35	C4
2	C29	ITV	10	C02	
3	C52	BBC1	11	C02	
4	C51	BBC2	12	C02	
5			13	C02	
6	VIDEO	BHM	14	C02	
7	C02		15	C02	

Fig. 17.

Tuning in a Channel Temporarily

You can tune in a channel temporarily, even when it has not been preset. Use the buttons on the Full-Function side of the Remote Commander.

- 1 Press C on the Remote Commander. For cable channels, press C twice. The indication "C" ("S" for cable channels) appears on the screen.
- 2 Enter the double-digit channel number using the number buttons (e.g. for channel 4, first press 0, then 4).

For higher programme positions:
The display scrolls automatically.

If you have made a mistake:
Press \leftarrow to go back to the previous position.
To go back to main menu:
Keep pressing \leftarrow .
To go back to the normal TV picture:
Press MENU.

MANUAL PROGRAMME PRESET

Skipping Programme Positions

You can skip unused programme positions when selecting programmes with the PROGR +/- buttons. However, the skipped programmes may still be called up when you use the number buttons.

- 1 Press MENU to display the main menu.
- 2 Select Preset with Δ + or ∇ - and press OK. The PRESET menu appears.
- 3 Select Manual Programme Preset with Δ + or ∇ - and press OK. The MANUAL PROGRAMME PRESET menu appears. (See Fig. 18.)
- 4 Using Δ + or ∇ -, select the programme position which you want to skip and press OK. The "SYSTEM" position changes colour.
- 5 Press Δ + or ∇ - until --- appears in the SYSTEM position. (See Fig. 19.)
- 6 Press OK. (See Fig. 20.) When you select programmes using the PROGR +/- buttons, the programme position will be skipped.
- 7 Repeat steps 4 to 6 to skip other programme positions.



PROG. SYS.	CH	SEARCH	LABEL	AFT
1	B/G	C21 (off)	---	---
2	B/G	C22 (off)	---	---
3	B/G	C23 (off)	---	---
4	B/G	C24 (off)	---	---
5	B/G	C25 (off)	---	---
6	B/G	C26 (off)	---	---
7	B/G	C27 (off)	---	---
8	B/G	C28 (off)	---	---
9	B/G	C29 (off)	---	---
10	B/G	C29 (off)	---	---

Fig. 18.

1	B/G	C21 (off)	---	---
---	-----	-----------	-----	-----

Fig. 19.

1	B/G	C21 (off)	---	---
---	-----	-----------	-----	-----

Fig. 20.

MANUAL PROGRAMME PRESET

Captioning a Station Name

Programme names are automatically taken from Teletext if available. However you can also "name" a channel or an input video source using up to five characters (letters or numbers) to be displayed on the TV screen (e.g. BBC1). Using this function, you can easily identify which channel or video source you are watching.

- 1 Press MENU to display the main menu.
- 2 Select Preset with Δ + or ∇ - and press OK. The PRESET menu appears.
- 3 Select Manual Programme Preset with Δ + or ∇ - and press OK. The MANUAL PROGRAMME PRESET menu appears. (See Fig. 21.)
- 4 Using Δ + or ∇ -, select the programme position you want to caption and press OK repeatedly until the first element of the LABEL position is highlighted.
- 5 Select a letter or number with Δ + or ∇ - and press OK. The next element will be highlighted. Select other characters in the same way. If you want to leave an element blank, select - and press OK. (See Fig. 22.)
- 6 After selecting all the characters, press OK repeatedly until the cursor appears by the next programme position (at the left margin). Now the caption you chose is stored. (See Fig. 23.)
- 7 Repeat steps 5 and 6 to caption names for other channels.

PROG. SYS.	CH	SEARCH	LABEL	AFT
1	B/G	C21 (off)	---	---
2	B/G	C22 (off)	---	---
3	B/G	C23 (off)	---	---
4	B/G	C24 (off)	---	---
5	B/G	C25 (off)	---	---
6	B/G	C26 (off)	---	---
7	B/G	C27 (off)	---	---
8	B/G	C28 (off)	---	---
9	B/G	C29 (off)	---	---
10	B/G	C29 (off)	---	---

Fig. 21.

2	B/G	C22 (off)	---	---
---	-----	-----------	-----	-----

Fig. 22.

2	B/G	C22 (off)	---	---
---	-----	-----------	-----	-----

Fig. 23.

MANUAL PROGRAMME PRESET

Manual Fine-Tuning

Normally, the AFT (automatic fine-tuning) is already operating. However, if the picture is distorted, you can use the manual fine tuning function to obtain better picture reception.

- 1 Press MENU to display the main menu.
- 2 Select Preset with Δ + or ∇ - and press OK. The PRESET menu appears.
- 3 Select Manual Programme Preset with Δ + or ∇ - and press OK. The MANUAL PROGRAMME PRESET menu appears. (See Fig. 24.)
- 4 Using Δ + or ∇ -, select the programme position corresponding to the channel which you want to manually fine-tune, and press OK repeatedly until the AFT position changes colour.
- 5 Fine-tune the channel with Δ + or ∇ - so that you get the best TV reception. As you press the cursor buttons, the frequency changes from -15 to +15. (See Fig. 25.)
- 6 After fine tuning, press OK.
- 7 Repeat steps 4 to 6 to fine-tune other channels.

To reactivate AFT (automatic fine tuning): Repeat from the beginning and select "ON" in step 5.

PROG. SYS.	CH	SEARCH	LABEL	AFT
1	B/G	C21 (off)	---	---
2	B/G	C22 (off)	---	---
3	B/G	C23 (off)	---	---
4	B/G	C24 (off)	---	---
5	B/G	C25 (off)	---	---
6	B/G	C26 (off)	---	---
7	B/G	C27 (off)	---	---
8	B/G	C28 (off)	---	---
9	B/G	C29 (off)	---	---
10	B/G	C29 (off)	---	---

Fig. 24.

2	B/G	C24 (off)	---	---
---	-----	-----------	-----	-----

Fig. 25.

2	B/G	C24 (off)	---	---
---	-----	-----------	-----	-----

Fig. 26.

PARENTAL LOCK

Parental Lock

You can prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

- 1 Press MENU to display the main menu.
- 2 Select Preset with Δ + or ∇ - and press OK. The PRESET menu appears.
- 3 Select Parental Lock with Δ + or ∇ - and press OK. The PARENTAL LOCK menu appears. (See Fig. 27.)
- 4 Using Δ + or ∇ -, select the programme position you want to block and press OK. The CH and LABEL of the selected programme number, change colour indicating that this programme is now blocked. (See Fig. 28.)
- 5 Repeat step 4 to block other programme positions.

PROG. SYS.	CH	SEARCH	LABEL	AFT
1	B/G	C21 (off)	---	---
2	B/G	C22 (off)	---	---
3	B/G	C23 (off)	---	---
4	B/G	C24 (off)	---	---
5	B/G	C25 (off)	---	---
6	B/G	C26 (off)	---	---
7	B/G	C27 (off)	---	---
8	B/G	C28 (off)	---	---
9	B/G	C29 (off)	---	---
10	B/G	C29 (off)	---	---

Fig. 27.

PROG. SYS.	CH	SEARCH	LABEL	AFT
1	B/G	C21 (off)	---	---
2	B/G	C22 (off)	---	---
3	B/G	C23 (off)	---	---
4	B/G	C24 (off)	---	---
5	B/G	C25 (off)	---	---
6	B/G	C26 (off)	---	---
7	B/G	C27 (off)	---	---
8	B/G	C28 (off)	---	---
9	B/G	C29 (off)	---	---
10	B/G	C29 (off)	---	---

Fig. 28.

If you try to select a programme that has been blocked: The message "LOCKED" appears on the blank TV screen.

Cancelling blocking

- 1 On the PARENTAL LOCK menu, select the programme position you want to unblock with Δ + or ∇ -. Press OK.
- 2 The CH and LABEL change to normal colour indicating that the blocking has been cancelled.

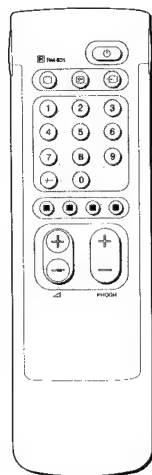
If you have made a mistake: Press \leftarrow to go back to the previous position.

To go back to main menu: Keep pressing \leftarrow .

To go back to the normal TV picture: Press MENU.

Operating Instructions

Watching the TV



If no picture appears when you depress on the TV

and if the standby indicator on the TV is lit, the TV is in standby mode. Press or one of the number buttons to switch it on.

This section explains the basic functions you use while watching TV. Most of the operations can be done using the simple side of the Remote Commander.

Switching the TV on and off

Switching on

Depress on the TV.

Switching off temporarily

Press on the Remote Commander. The TV enters standby mode and the standby indicator on the front of the TV lights up.

To switch on again

Press , , or one of the number buttons on the Remote Commander.

Switching off completely

Depress on the TV.

Selecting TV Programmes

Press or press number buttons.

To select a double-digit number

Press , then the numbers. For example, if you want to choose 23, press , 2, and 3.

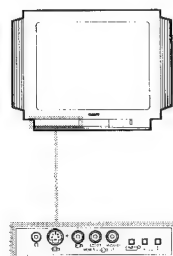
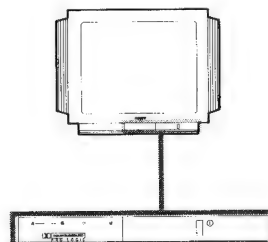
Adjusting the Volume

Press .

Operating the TV Using the Buttons on the TV

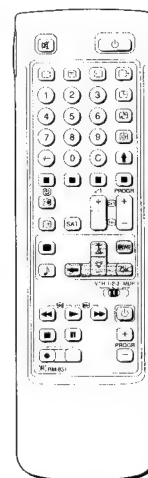
With the buttons on the TV, you can select programmes, adjust the volume, and select video input sources.

- Press repeatedly until the programme number, (for volume), or (for video input picture) appears. Then adjust with the buttons.
- Press to switch on the TV from the standby mode.
- Press simultaneously to reset picture and sound controls to the factory preset level (RESET symbol is displayed).



For details of the teletext operation, refer to page 47.

For details of the video input picture, refer to page 51.



To make the Programme Table disappear
Press MENU.

Watching Teletext or Video Input

Watching teletext

- Press to view the teletext.
- Press three number buttons to select a page.
- Press one of the coloured buttons for fasttext operation.
- Press or for the next or preceeding page.
- To go back to the normal TV picture, press .

Watching a video input picture

Press repeatedly until the desired video input appears. To go back to the normal TV picture, press .

Starlight Music mode

When you connect an audio source (e.g. CD player) to of the front and select or , this TV automatically goes into the Starlight Music mode. In this mode, the Graphic Equalizer appears for a while leaving a starlight scene to indicate that the TV is still on.

This mode may appear in other cases when the video signal of or is absent.

More Convenient Functions

Use the Full-Function side of the Remote Commander.

Displaying the on screen indications

- Press once to display all the indications. They will disappear after some seconds.
- Press twice to have the programme number and label stay on screen. Press twice again to make indications disappear.

Muting the sound.

Press .

To resume normal sound, press again.

Displaying the time

Press . This function is available only when teletext is broadcast.

To make the time display disappear, press again.

1	2:59
2	3:00
3	3:01
4	3:02
5	3:03
6	3:04
7	3:05
8	3:06
9	3:07
10	3:08

Fig.29.

Displaying of the Programme Table

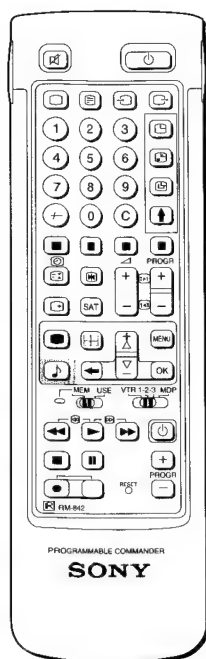
Press OK. A Programme Table will be displayed on the right side of the TV screen (See. Fig.29)

Selecting of TV programmes

Press or select the desired programme position using or and press OK.

Adjusting and Setting the TV Using the Menu

PICTURE CONTROL SOUND CONTROL



If you have made a mistake:
Press \leftarrow to go back to the previous position.
To go back to the main menu:
Keep pressing \leftarrow .
To go back to the normal TV picture:
Press MENU.

Note:
HUE is only available for NTSC colour system.

Note on BALANCE:
Balance control can only be used when Digital Surround is in "OFF" or "Simulated" modes. The level of left and right speaker volume is set using the Dolby Pro Logic set up menu (see page 46).

When watching a video input source with stereo sound:
You can select DUAL SOUND to change the sound.

When watching a programme in dual sound mode:
Digital Surround Mode becomes OFF automatically.

Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste. In addition, you can change the aspect ratio of the TV display for wide screen effect. You can also select dual sound (bilingual) programmes when available or adjust the sound for listening with the headphones (Ω) or individually adjust and store the volume level of each channel (Volume offset). Also you have the possibility to adjust the sound to your individual taste using the Graphic Equalizer and special Sound effects.

- 1 Press \blacksquare (for picture) or \blacktriangle (for sound) on the Remote Commander.
or
Press MENU and select Picture Control or Sound Control, then press OK.
The PICTURE CONTROL or SOUND CONTROL menu appears. (See Fig. 30 or Fig. 31)
- 2 Using Δ or ∇ , select the item you want to adjust and press OK. The selected item changes colour. (See Fig. 32)
- 3 Adjust the setting with Δ or ∇ and press OK.
The cursor appears beside the next item (at the left margin). (See Fig. 33)
For the effect of each control, see the table below.
- 4 Repeat steps 2 and 3 to adjust other items.

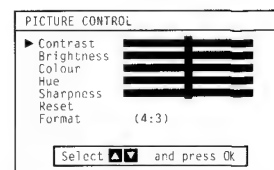


Fig. 30.

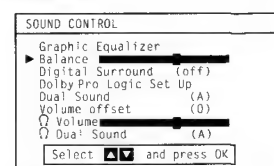


Fig. 31.



Fig. 32.

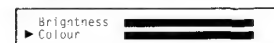


Fig. 33.

Effect of each control

PICTURE CONTROL	Effect
Contrast	Less — — More
Brightness	Darker — — Brighter
Colour	Less — — More
Hue	Greenish — — Reddish
Sharpness	Softer — — Sharper
Reset	Resets picture to the factory preset levels.
Format	4:3 Normal 16:9 wide screen effect

SOUND CONTROL	Effect
Graphic Equalizer	(See page 45 for more information)
Balance	More left — — More right
[Digital] Surround	OFF: Normal ON: Choice among special sound effects: Dolby Pro Logic \rightarrow Hall \rightarrow Arena \rightarrow Dome \leftarrow OFF \leftarrow Simulated (gives width to a monaural source) \leftarrow
Dolby Pro Logic Set Up	(See page 46)
Dual Sound	A : left channel B : right channel stereo mono The selected mode of the A- ∞ -B indicator on the TV light up.
Volume offset	-7 Less 0 More +7
Headphones:	
Ω Volume	Less — — More
Ω Dual Sound	A : left channel B : right channel STEREO MONO

Note: The modifications made in "USER" mode will be stored. All other settings are reset to factory-set level when you change to another mode.

Graphic Equalizer

Using this function you can individually adjust the sound by cutting and boosting selected frequencies. You can also select between the following modes:

Flat → POP → Rock → Jazz → Vocal → User

- 1 Select Sound Control in the main menu, then select Graphic Equalizer using Δ + or ∇ - and press OK. The GRAPHIC EQUALIZER menu appears (see Fig. -34).
- 2 Press OK. The colour of "Mode" changes. Select the desired mode with Δ + or ∇ - and press OK.
- 3 If you want to modify a mode, select the desired bar of a frequency band using Δ + or ∇ - and press OK. The selected bar changes colour. Using Δ + or ∇ - adjust the level of frequency and press OK. In this way you can adjust all 5 graphic bars.
- 4 Press MENU to return to the normal TV mode.

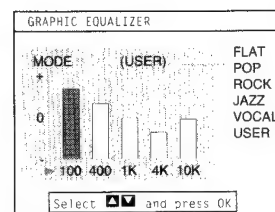


Fig -34.

PROGRAMME TABLE

To go back to the normal TV picture:
Press MENU.

Using the Programme Table

On this table, you can see which channel is preset to which programme position. You can also select programmes using this table.

- 1 From the main menu, select Programme Table with Δ + or ∇ - and press OK.

The PROGRAMME TABLE menu appears.

To scroll to higher programme numbers, press ∇ -.

- 2 To select a programme using this menu select the programme number with Δ + or ∇ - and press OK. The selected programme appears.

PROGRAMME TABLE			
PROG CH	LABEL	PROG CH	LABEL
1 C21	---	11 C38	---
2 C24	---	12 C40	---
3 C26	---	13 C41	---
4 C27	---	14 C43	---
5 C23	---	15 C54	---
6 C22	---	16 C55	---
7 C32	---	17 C56	---
8 C36	---	18 C57	---
9 C38	---	19 C48	---
10 C39	---	20 C46	---

Select [left arrow] [right arrow] and press OK

TIMER

To switch off the timer:
Select "OFF" in step 3.

To check the remaining time:
Press \odot .

Using the Sleep Timer

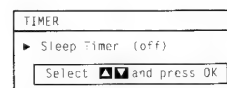
You can select a time period after which the TV automatically switches into standby mode.

- 1 From the main menu, select Timer with Δ + or ∇ - and press OK. The TIMER menu appears.

- 2 Press OK. The time period option changes colour.

- 3 Select the time period with Δ + or ∇ -.
The time period (in minutes) changes as follows:
10→20→30 →40→50→60 →70→80→90
↑ _____ OFF _____

- 4 After selecting the time period, press OK. The cursor moves back to the left margin and the timer starts counting. One minute before the TV switches into standby mode, a message is displayed on the screen.



Dolby Pro Logic set up

Using this function you can experience panoramic effects of sound. Before starting, connect the enclosed centre speaker and the surround speakers. Or you can use your own speakers (at least 8Ω impedance) instead. (See page 35).

To enjoy the best sound from your TV The Dolby Pro Logic mode should be selected when the source material you are watching is Dolby Surround encoded.

- 1 Select Sound Control in the main menu, then select Dolby Pro Logic set up using $\Delta+$ or $\nabla-$ and press OK. The Dolby Pro Logic Setup menu appears. (Digital Surround is set to Dolby Pro Logic mode automatically). (Fig. 35).
The following steps 2 to 7 are necessary only when you install the TV and the speakers or change their positions. Once having adjusted the volume in each of the speakers to the same listening level, you can always obtain the best effects at the listening position.
In other cases, press $\nabla-$ and go to step 8.
- 2 Press OK
The cursor moves to the position of L (Left speaker volume) and a test tone outputs in the left speaker. (Fig.36)
- 3 Press OK if you want to adjust the volume of L, or press repeatedly $\Delta+$ or $\nabla-$ to select C (Centre speaker). R (Right speaker). S (Surround speakers) and press OK.
The selected bar is highlighted.
- 4 Press $\Delta+$ or $\nabla-$ to adjust the volume.
The highlighted bar changes its height accordingly.
- 5 Press OK.
The cursor moves to the next speaker.
- 6 Repeat steps 3 to 5 to adjust other volumes according to your taste.
- 7 Press \leftarrow to exit Level Setting.
- 8 Press $\nabla-$ to select Centre Mode.
- 9 Press OK to change Centre Mode.
- 10 Select the mode using $\Delta+$ or $\nabla-$ and press OK.
Normal: The centre speaker is active. Normally select this mode when the centre speaker is connected.
Phantom: If you are unable to connect the centre speaker, select this mode. No sound comes from the centre channel and the left and right speakers compensate creating a "phantom" centre image.
- 11 Press MENU to return to the normal screen.

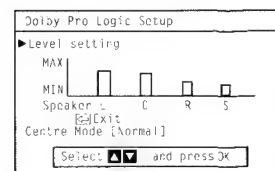


Fig. 35.

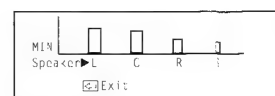
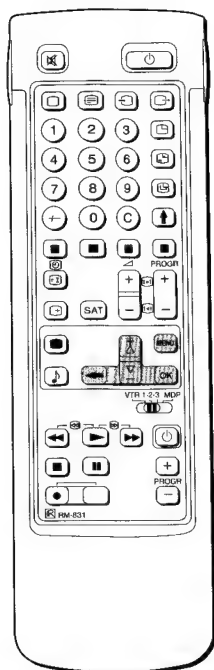


Fig. 36.

Teletext



Note:

Teletext errors may occur if the broadcasting signals are weak.

With the simple side of the Remote Commander:

You can switch teletext on and off, operate Fastext, and directly select page numbers.

Note:

Fastext operation is only possible, if the TV station broadcasts Fastext signals.

TV stations broadcast an information service called Teletext via the TV channels. Teletext service allows you to receive various information pages such as weather reports or news at any time you want. For advanced teletext operation, use the buttons on the Full-Function side of the Remote Commander.

Direct Access Functions

Switching Teletext on and off

- 1 Select the TV channel which carries the teletext broadcast you want to watch.
- 2 Press to switch on teletext.
A teletext page will be displayed (usually the index page). If there is no teletext broadcast, "No text available" is displayed on the information line at the top of the screen.

To switch teletext off

Press .

Selecting a teletext page

With direct page selection

Use the number buttons to input the three digits of the chosen page number.

If you have made a mistake, type in any three digits. Then re-enter the correct page number.

With page-catching

- 1 Select a teletext page with a page overview (e.g. index page).
- 2 Press OK. Using or , select the desired page. "Page Catching" will be displayed on the information line. Press OK. The requested page will appear in a few seconds.

Press to resume normal teletext reception.

Accessing next or preceding page

Press (PAGE +) or (PAGE -).
The next or preceding page appears.

Superimposing the teletext display on the TV programme

- Press once in teletext mode or twice in TV mode.
- Press again to resume normal teletext reception.

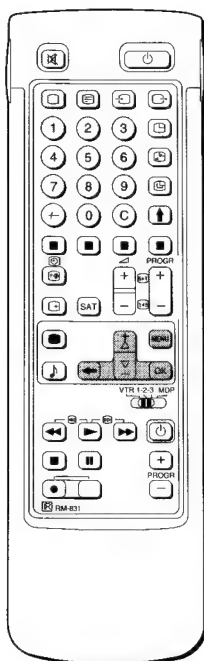
Preventing a teletext page from being updated

- Press (HOLD). The HOLD symbol "" is displayed on the information line.
- Press to resume normal teletext reception.

Using Fastext

With Fastext you can access pages with one key stroke. When a Fastext page is broadcast, a colour-coded menu will appear at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons on the Remote Commander.

Press the corresponding coloured button on the Remote Commander which corresponds to the colour-coded menu. The page will be displayed after some seconds.



Note:
Some of the features may not be available depending on the Teletext service.

Note on Subtitles:
If the subtitles are not broadcast on page 888, please select the subtitle page using the number buttons.

To cancel the request:
Select "OFF" for the TIME PAGE setting.

Using the Teletext Menu

This TV is provided with a menu-guided teletext system. When teletext is switched on, you can use the menu buttons to operate the teletext menu. Select the teletext menu functions in the following way:

- 1 Press MENU. The menu will be superimposed on the teletext display. (See Fig. 37)
- 2 Using $\Delta+$ or $\nabla-$, select the teletext function you want and press OK. (See Fig. 38)

USER PAGES/PRESET USER PAGES

See page 49 for information about presetting and operating the user pages.

INDEX

The index will give you an overview of the contents of the teletext and the page numbers.

TOP/BOTTOM/FULL

For convenient reading of a teletext page, you can enlarge the teletext display with the ability to scroll up and down the screen. After having selected the function, an information line Top/Bottom/Full will be displayed. (See Fig. 39)

Press $\Delta+$ for Top to enlarge the upper half. For Bottom keep pressing $\nabla-$, to enlarge the lower half. Press OK for Full to resume the normal size.

Press Menu to resume normal teletext reception.

TEXT CLEAR

After having selected the function, you can watch a TV programme while waiting for a requested teletext page to be captured (The symbol changes colour) (see Fig. 40).

Press Menu to view the requested page.

SUBTITLES

Your teletext service will inform you if a TV programme is subtitled. After having selected the function the subtitles will be displayed.

REVEAL

Sometimes pages contain concealed information, such as answers to a quiz. The reveal option lets you disclose the information. After having selected the function, an information line "REVEAL ON/OFF" will be displayed. (See Fig. 41)

Using $\Delta+$ or $\nabla-$, select ON to reveal the information or OFF to conceal it again.

Press Menu to resume normal teletext reception.

TIME PAGE

Your teletext service will inform you, if a time coded page is available. You may have a page (e.g. an alarm page) displayed at a certain time.

- 1 Press OK, using $\Delta+$ or $\nabla-$, select ON and press OK.
- 2 To select the desired page, enter the three digits of the page number using the number buttons.
- 3 To select the desired time, enter four digits for the desired time (e.g. 1800) using the number buttons. Press MENU. The selected time is displayed at the top in the left-handed corner. At the requested time, the page will be displayed.

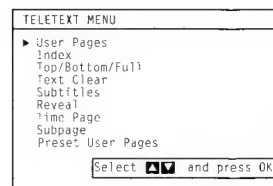


Fig. 37.

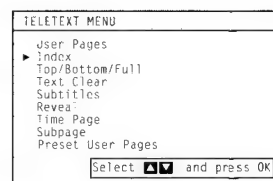


Fig. 38.

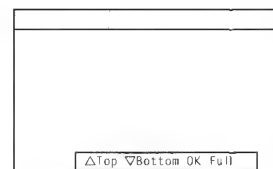


Fig. 39.

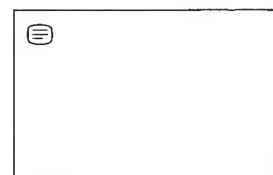


Fig. 40.

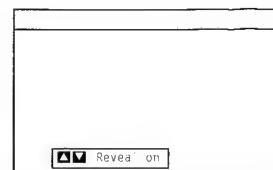


Fig. 41.

To cancel the request:
Select "Subpage" and press OK.

If two broadcasting stations use the same Teletext:
You can preset one bank to 2 different programme positions.

SUBPAGE

You may want to select a particular teletext page from several subpages which are rotated automatically. After having selected the function, an information line will be displayed.

To select the desired subpage, enter four digits using PROGR+/- or the number buttons. (e.g. enter 0002 for the second page of a sequence).

User Page Bank System

You can store up to 30 pages in the "Teletext page bank system". In this way you have quick access to the pages you watch frequently.

Storing pages

There are 5 "banks" (A to E) for 5 teletext stations. In each bank you can store 6 preferred pages (P1 to P6).

- 1 Press (if Teletext is not on already) and MENU to show the TELETEXT MENU display.
- 2 Select PRESET USER PAGES with Δ + or ∇ - and press OK.
- 3 Select the desired bank with Δ + or ∇ - and press OK. The cursor will go to the first position (P1) of the preferred pages.
- 4 Input the three digits of your first preferred page with the number buttons and press OK. The cursor will go to the second position.
- 5 Repeat step 4 for the other 5 page numbers you want to preset. If you do not want to preset all 6 page numbers available, press OK without inserting any number. After having finished the presetting press OK repeatedly until the cursor appears besides the next bank at the left margin.
- 6 Select Allocate Bank with Δ + or ∇ - and press OK.
- 7 Select the programme position for which you have preset pages with Δ + or ∇ - and press OK. (See Fig. 42)
- 8 Select the desired bank with Δ + or ∇ - (Banks A to E are available) and press OK.
- 9 Repeat steps 3 to 8 for the other 4 banks available.

Displaying User Pages

- 1 Select MENU.
- 2 Select User Pages with Δ + or ∇ - and press OK. A table of the stored preferred pages will be displayed. (See Fig. 43)
- 3 Select the desired page with Δ + or ∇ - and press OK. The page will be displayed after some seconds.

You can use the coloured buttons on the Remote Commander to have quick access to the first four User pages. Page 1 corresponds to the red button, P 2 to the green one, P 3 to the yellow one and P 4 to the blue button.

To select the desired page press the respective coloured button while you are in TV mode. Now the Page number of this teletext page will appear in white at the top in the left-handed corner of the TV screen. When the page number changes colour, the page is available. Press the coloured button again to display the page.

PRESET USER PAGES						
BANK	P1	P2	P3	P4	P5	P6
A	300	255	456	234	200	179
B	200	120	301	303	550	345
C	100	220	300	444		
D	128	321	255			
E	400	238	240	118	127	

Allocate Bank			
PROG LABEL	BANK	PROG LABEL	BANK
00	VHS	04	MTV
01	BBC1	05	SKY
02	BBC2	06	ITV

Select and press OK

Fig. 42.

USER PAGES - BANK B	
PAGE 300	
PAGE 200	
PAGE 203	
PAGE 500	
PAGE 234	
PAGE 159	

Select and press OK

Fig. 43.

Connecting and Operating Optional Equipment

Connecting Optional Equipment

You can connect optional audio-video equipment to this TV such as VCRs, video disc players, and stereo systems.

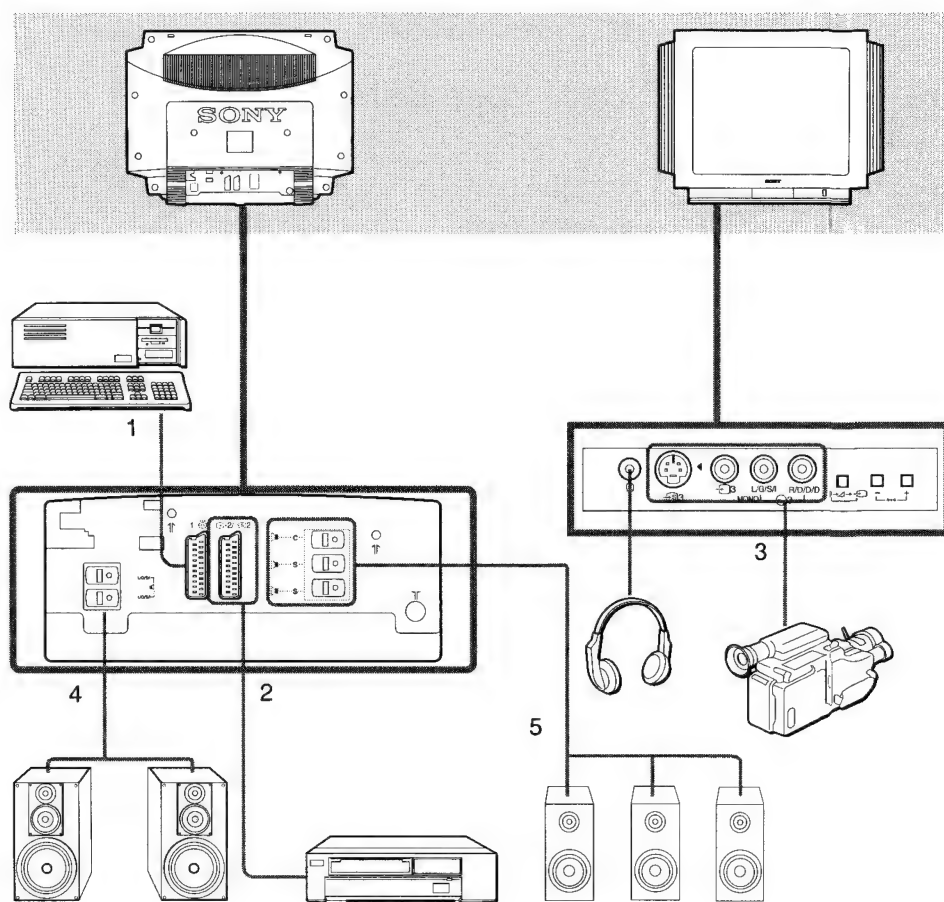
To connect a VCR using the $\overline{\text{I}}$ terminal:
Connect the aerial output of the VCR to the aerial terminal $\overline{\text{I}}$ of the TV.

We recommend that you tune in the signal to programme number "0". For details see "Preset Channels Manually" on page 37.

If the picture or the sound is distorted:
Move the VCR away from the TV.

S video input (Y/C input):
Video signals may be separated into Y (luminance or brightness) and C (chrominance) signals. Separating the Y and C signals prevents them from interfering with one another, and therefore improves picture quality (especially luminance). This TV is equipped with 2 S Video input jacks through which these separated signals can be input directly.

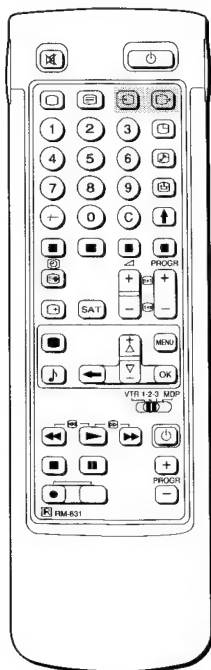
When connecting a monaural VTR:
Connect only the white \odot jack to both the TV and VCR.



Acceptable input signal	Available output signal
1 Normal audio/video and RGB signal	Video/audio from TV tuner
2 Normal audio/video and S video signal	Video/audio from selected source
3 Normal audio/video and S video signal	No outputs
4 No inputs	Audio signal (variable)
5 No inputs	Audio signal (variable)

Selecting input with PROGR +/- or number buttons

You can preset video input sources to the programme positions so that you can select them with PROGR +/- or number buttons. For details, see "Preset channels manually" on page 37.



Selecting input and output

This section explains how to view the video input picture (of the video source connected to your TV), and how to select the output signal using direct access buttons or the menu system.

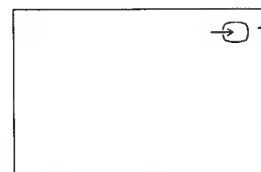
Selecting input

Press repeatedly to select the input source.

The symbol of the selected input source will appear.

To go back to the normal TV picture

Press .



Input modes

Symbol	Input signal
1	Audio/video input through the 1 connector
2	RGB input through the 1 connector
2	Audio/video input through the 2/ 2 connector
2	S video input through the 2/ 2 connector
3	Audio/video input through 3 and 3 on the front
3	S video input through the 3 connectors on the front (4-pin connector)

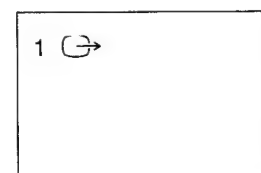
You can also select the input mode using the and +/- buttons on the TV. In this case, first select , and then press +/- buttons to select the input.

Selecting the output

The 2/ 2 connector outputs the source input from the other connectors.

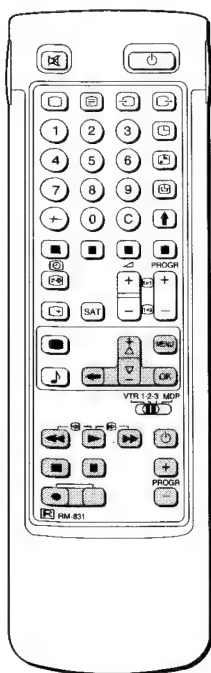
Press repeatedly to select the output.

The symbol of the selected output source appears.



Output modes

Symbol	2/ 2 connector outputs
1	The audio/video signal from the 1 connector
2	The audio/video signal from the 2/ 2 connector
2	The audio/S video signal from the 2/ 2 connector
3	The audio/video signal from the 3, 3 connectors
3	The audio/S video signal from the 3, 3 connectors
TV	The audio/video signal from the aerial terminal



When recording
When you use the ● (record) button, make sure to press this button and the one to the right of it simultaneously.

Checking and selecting the input and output sources using the menu

You can display the menu to see which input sources are selected for the TV screen, and which output source is selected. You can also select them on the menu display.

- 1 Select Video Connection with Δ + or ∇ - and press OK. The VIDEO CONNECTION menu appears. (See Fig. 44)
- You can see which source is selected for the TV and for the output. If you want to select the input and output on this menu, go on to the next step.
- 2 Select TV Screen (input source for the TV screen) or output (output source) with Δ + or ∇ - and press OK. One of the source items changes colour. (See Fig. 45)
- 3 Select the desired source with Δ + or ∇ -. (See Fig. 46)
For details about each source, see the table on page 51.
- 4 Press OK.
The selected source is confirmed, and the cursor appears. (See Fig. 47)
- 5 Repeat steps 2 to 4 to select the source for other inputs or outputs.

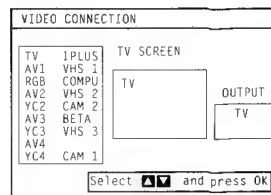


Fig. 44.



Fig. 45.



Fig. 46.

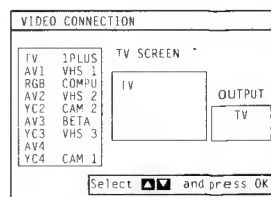


Fig. 47.

Remote Control of Other Sony Equipment

You can use the TV Remote Commander to control most Sony remote-controlled video equipment such as: Beta, 8mm or VHS VCRs or video disc players.

Tuning the Remote Commander to the equipment

- 1 Set the VTR 1/2/3 MDP selector according to the equipment you want to control:
VTR 1: Beta VCR
VTR 2: 8mm VCR
VTR 3: VHS VCR
MDP: Video disc player
- 2 Use the buttons indicated in the illustration to operate the additional equipment.












If your video equipment is furnished with a COMMAND MODE selector: set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander.

If the equipment does not have a certain function, the corresponding button on the Remote Commander will not operate.

For Your Information

Troubleshooting

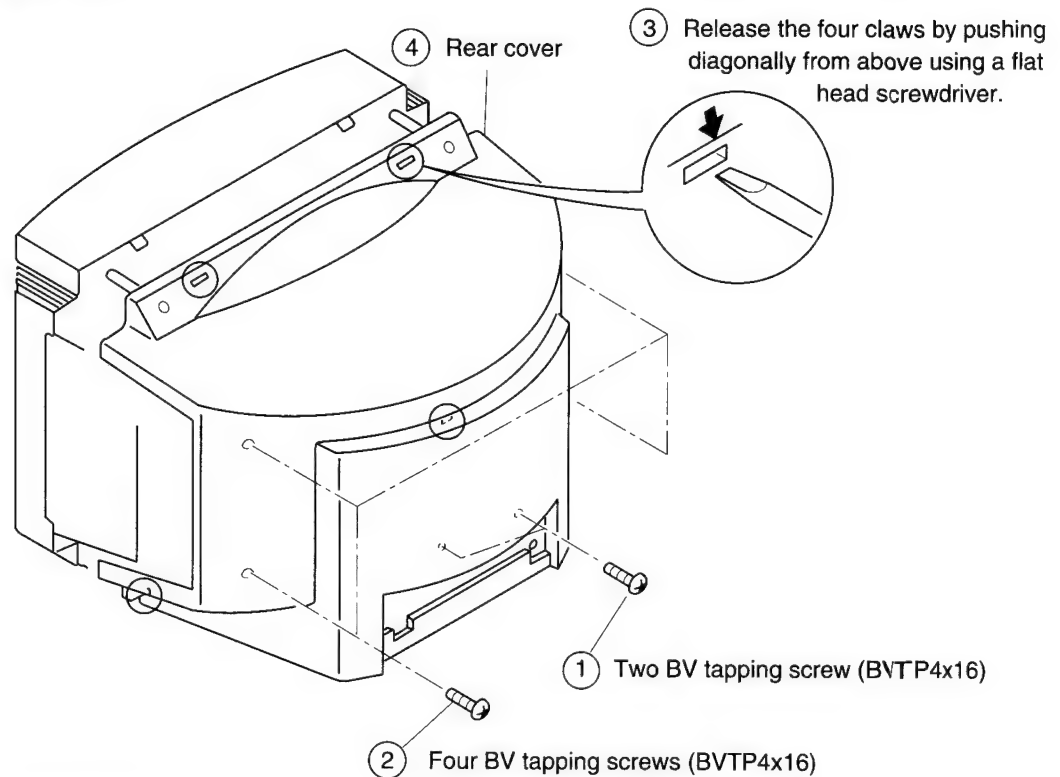
Here are some simple solutions to problems which may affect the picture and sound.

Problem	Solution
No picture (screen is dark), no sound	<ul style="list-style-type: none">• Plug the TV in.• Press  on the TV. (If  indicator is on, press  or a programme number on the Remote Commander.)• Check the aerial connection.• Check if the selected video source is on.• Turn the TV off for 3 or 4 seconds and then turn it on again using .
Poor or no picture (screen is dark), but good sound	<ul style="list-style-type: none">• Press  to enter the PICTURE CONTROL menu and adjust BRIGHTNESS, CONTRAST and COLOUR.
Poor picture quality when watching an RGB video source	<ul style="list-style-type: none">• Press  repeatedly to select .
Good picture but no sound	<ul style="list-style-type: none">• Press  +.• If  is displayed on the screen, press .
No colour for colour programmes	<ul style="list-style-type: none">• Press  to enter the PICTURE CONTROL menu, select RESET, then press OK.
Remote Commander does not function.	<ul style="list-style-type: none">• Replace battery.

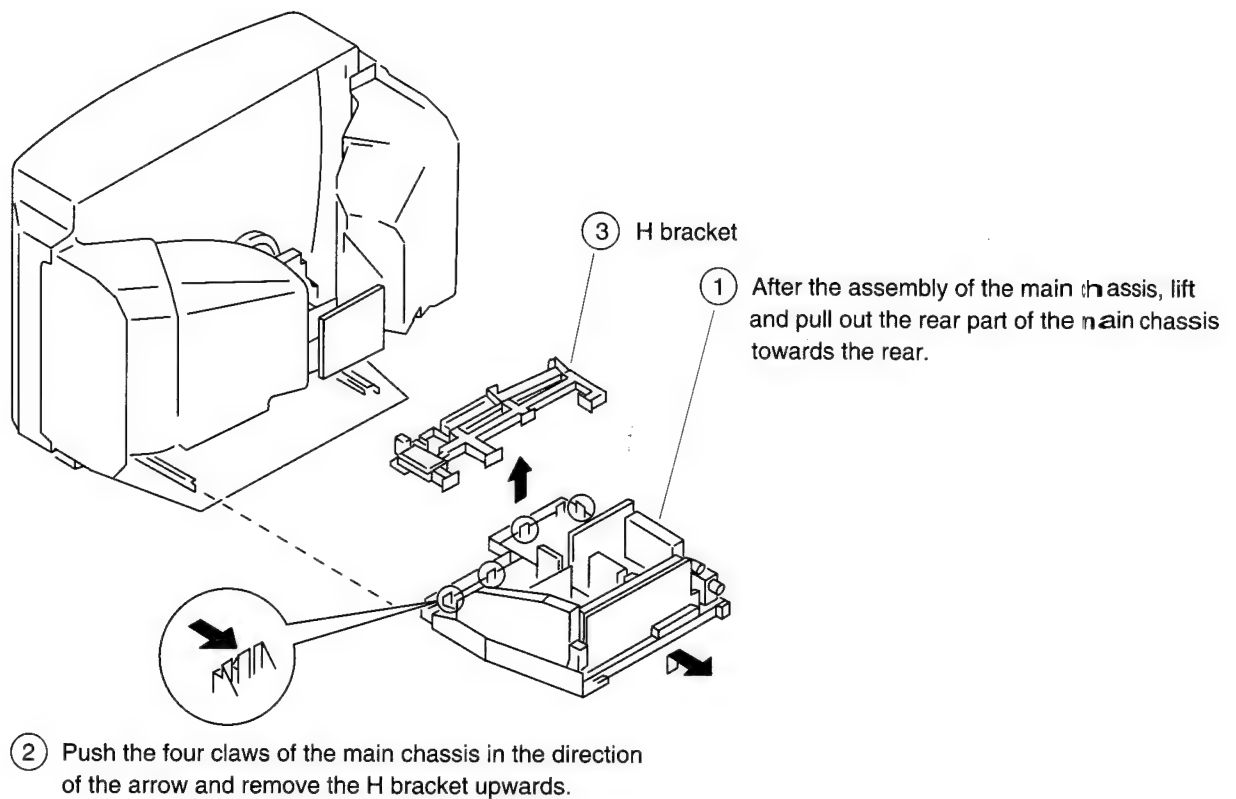
If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

SECTION 2 DISASSEMBLY

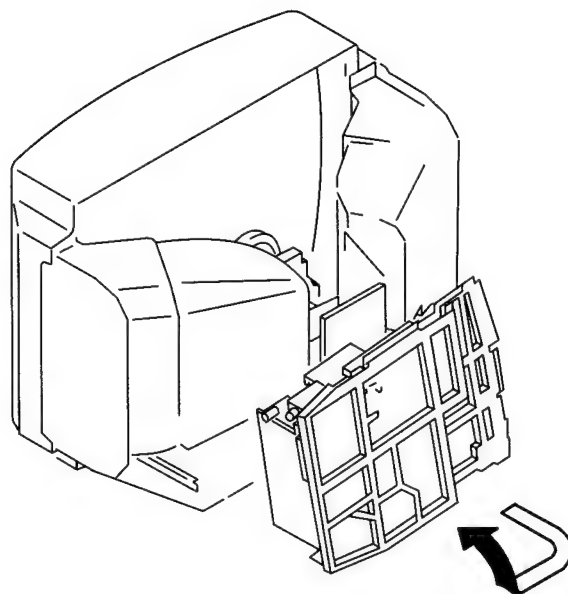
2-1. REAR COVER REMOVAL



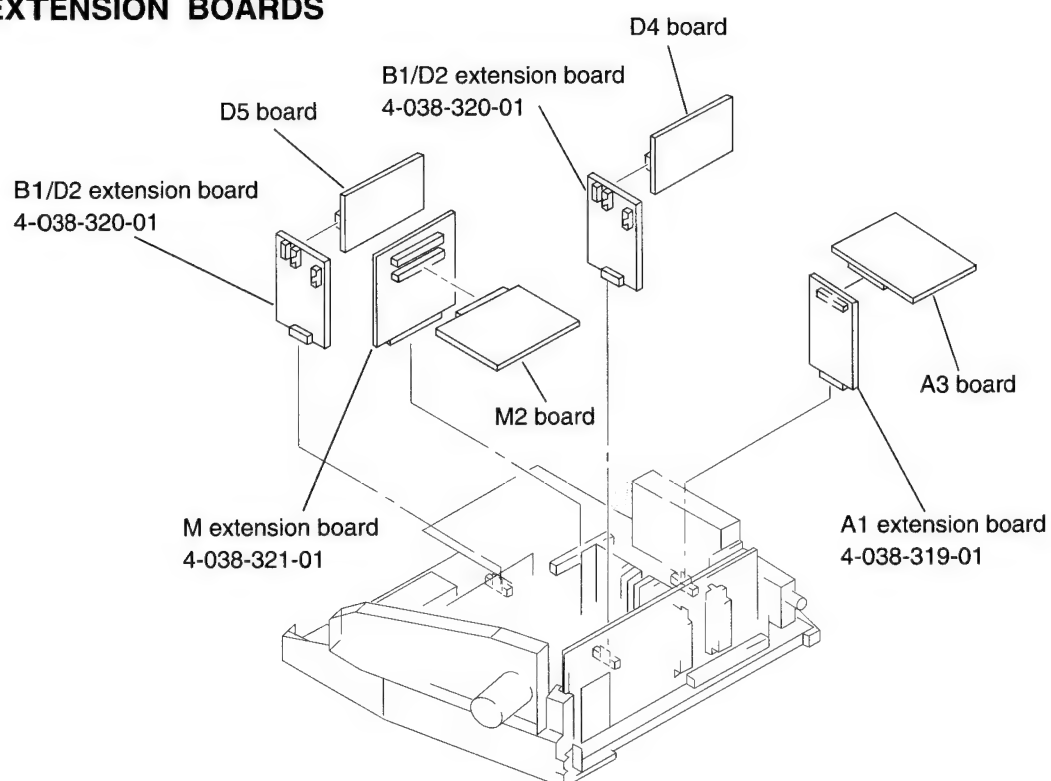
2-2. CHASSIS ASSY REMOVAL



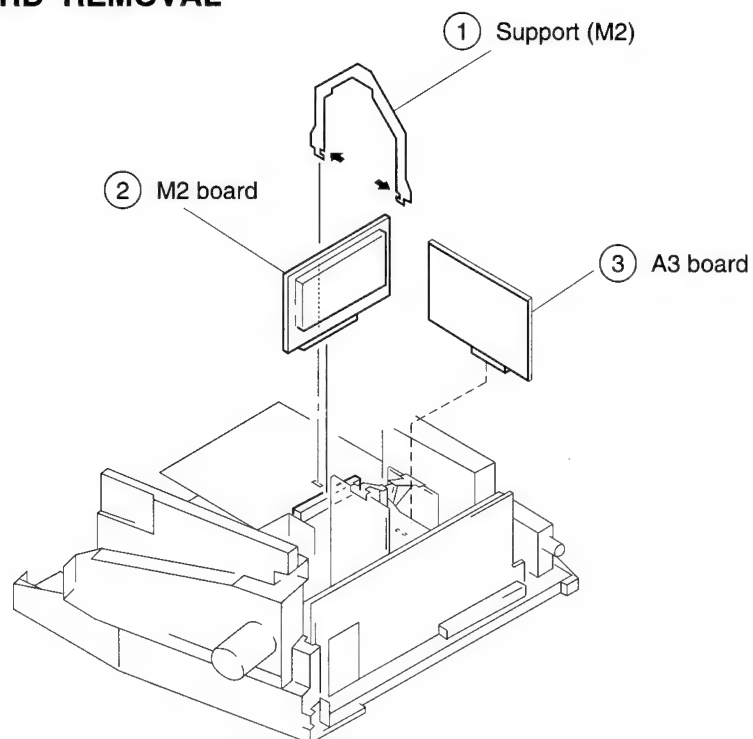
2-3. SERVICE POSITION



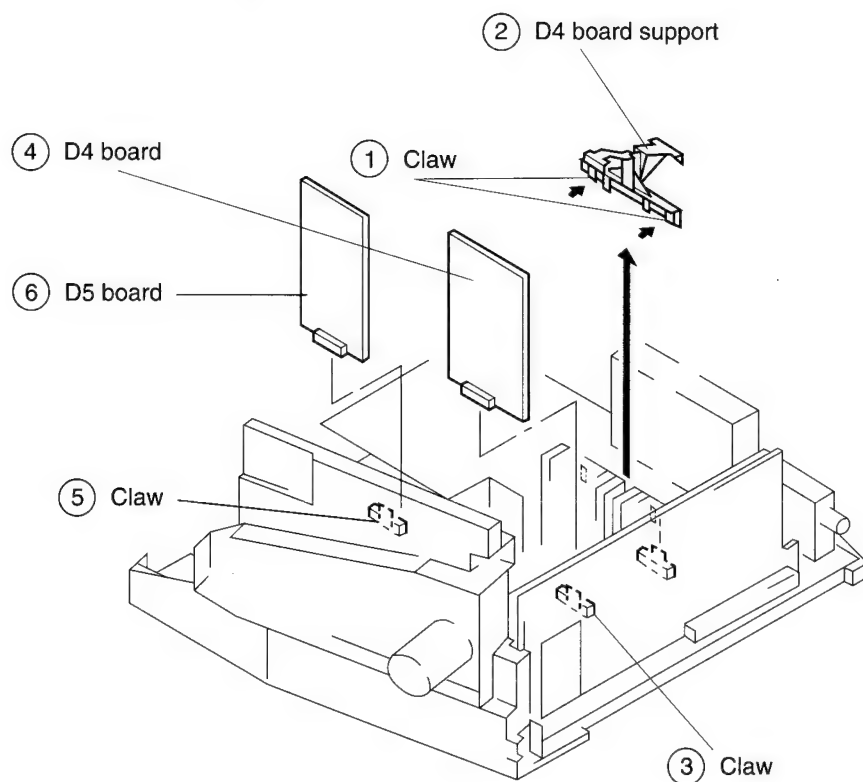
2-4. EXTENSION BOARDS



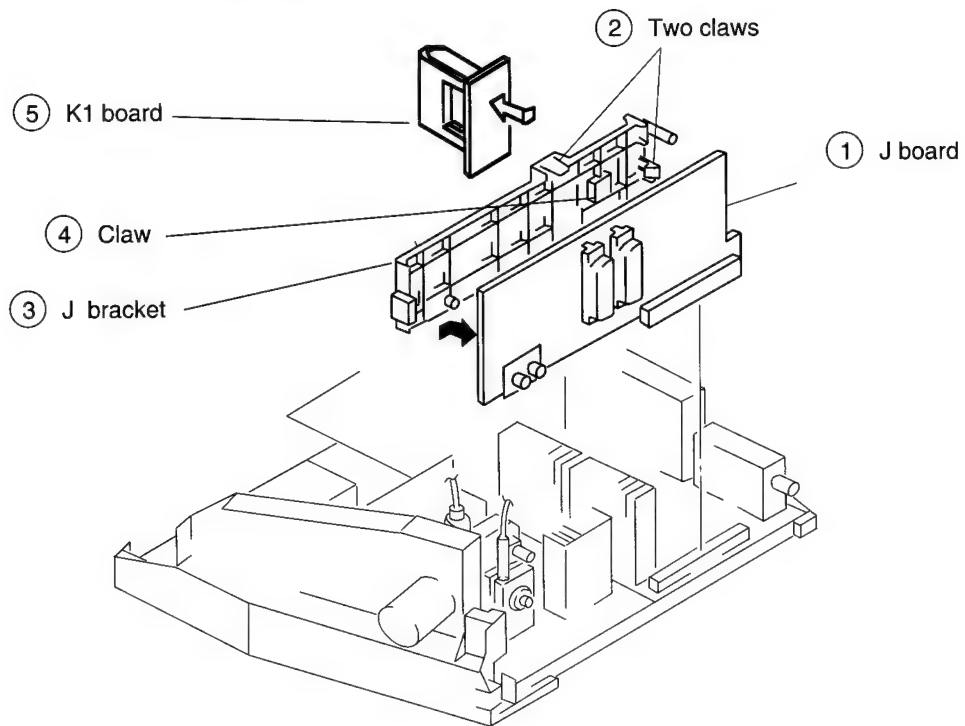
2-5. M2 AND A3 BOARD REMOVAL



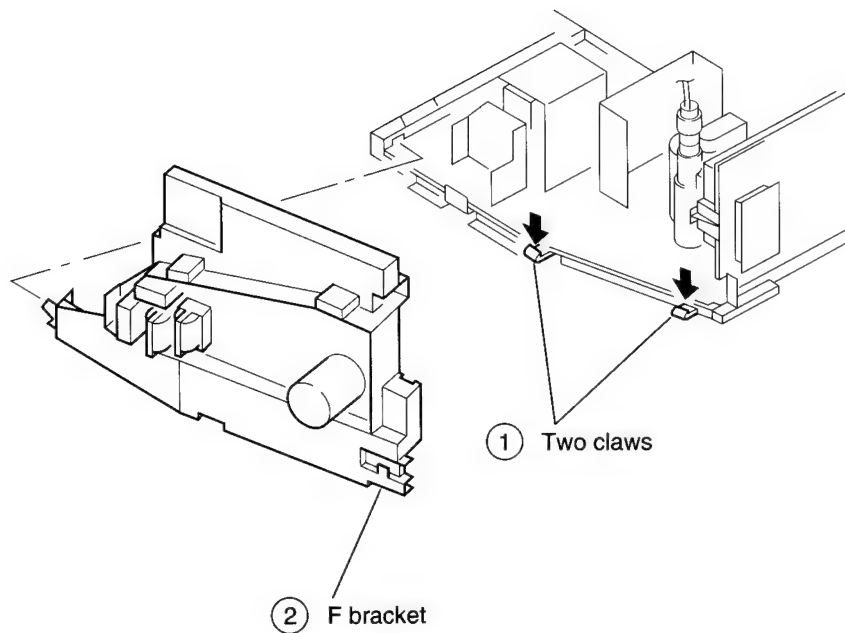
2-6. D4 AND D5 BOARD REMOVAL



2-7. J AND K1 BOARD REMOVAL

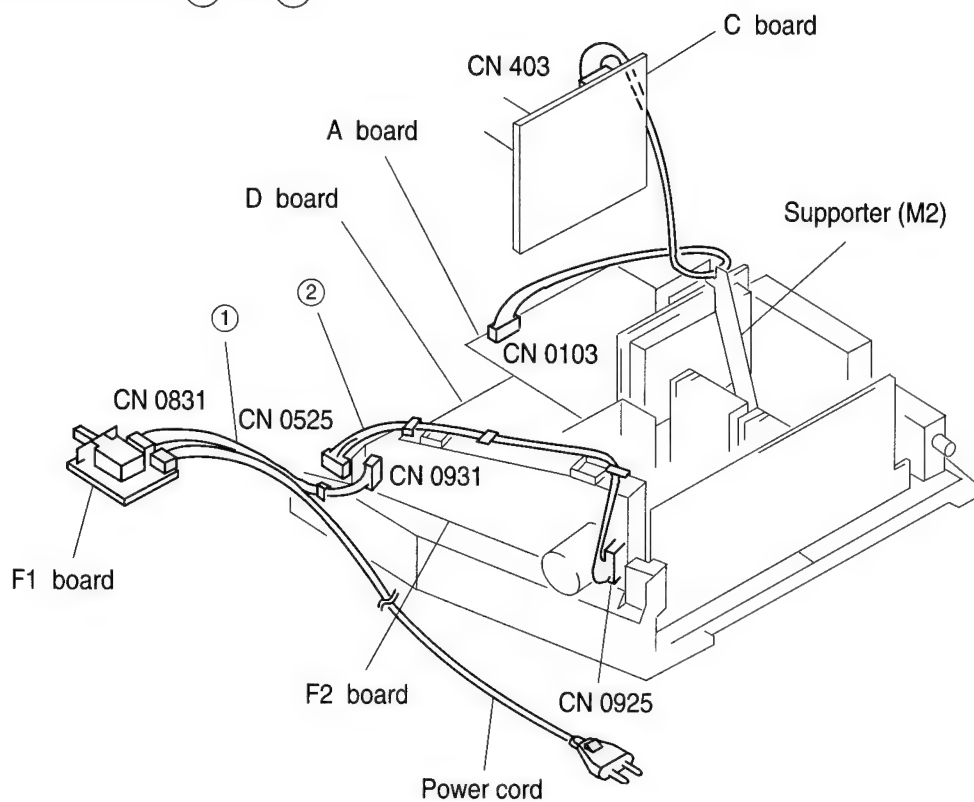


2-8. F BRACKET REMOVAL

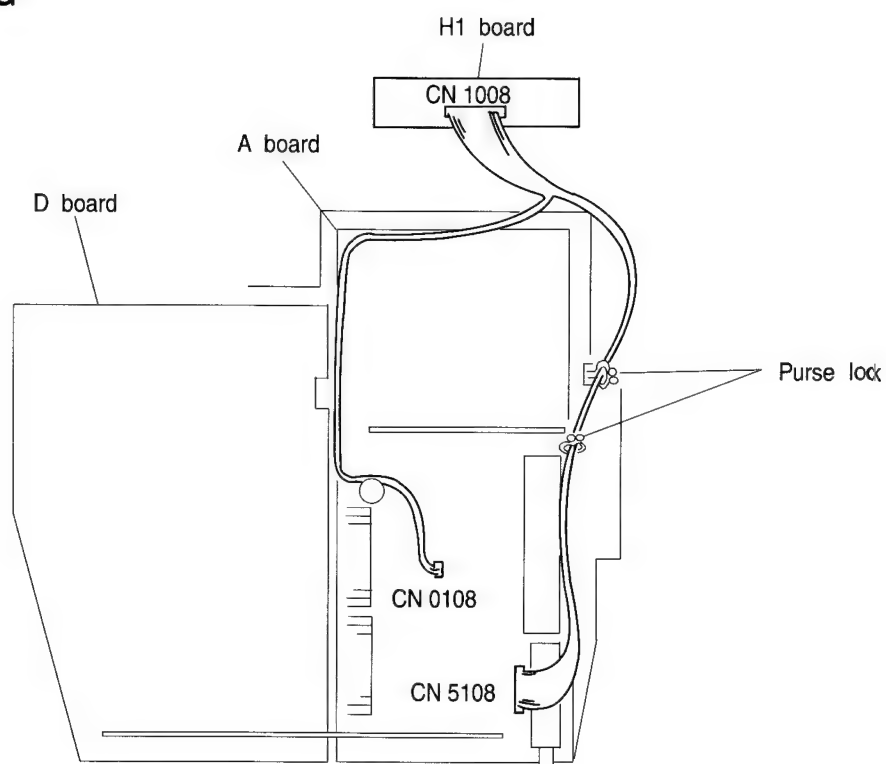


2-9-1. WIRE DRESSING

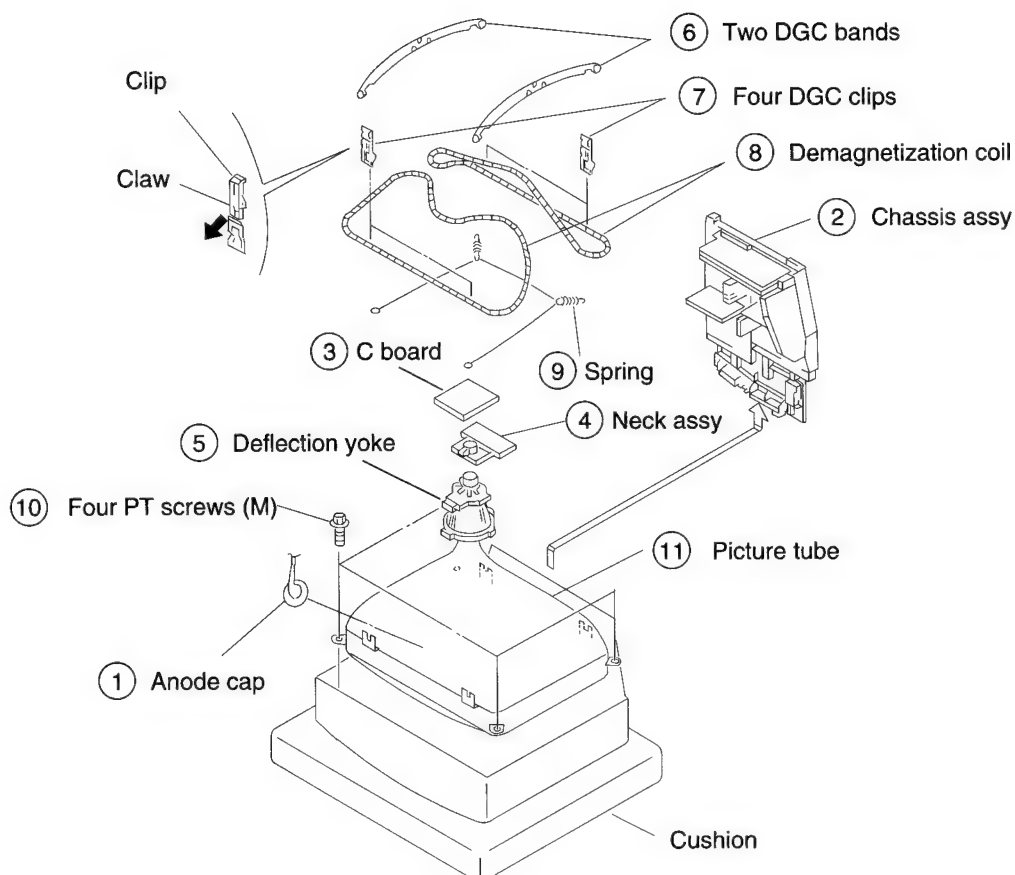
* Keep distance between ① and ②



2-9-2. WIRE DRESSING



2-10. PICTURE TUBE REMOVAL



• REMOVAL OF ANODE-CAP

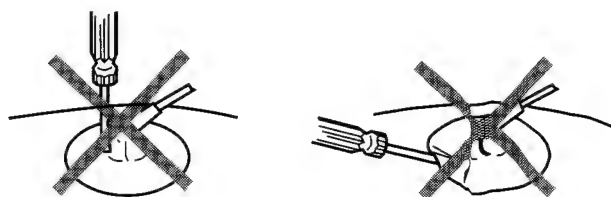
Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

* REMOVING PROCEDURES.

-
- ① Turn up one side of the rubber cap in the direction indicated by the arrow (a)
 - ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b)
 - ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow (c)

• HOW TO HANDLE AN ANODE-CAP

- ① Don't damage the surface of anode-cap with sharp shaped material !
- ② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built into the rubber.
- ③ Don't turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or damage the rubber.



SECTION 3

SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there is specific instruction to the contrary, carry out these adjustments with the rated power supply.
- Unless there is specific instruction to the contrary, set the controls and switches this way :

● Contrast 80% (or remote control normal)
 ⚙ Brightness 50%

Preparations :

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input the white signal with the pattern generator.

Contrast } normal
 Brightness }
2. Position neck assy as shown in Fig.3-2.
3. Set the pattern generator raster signal to red.
4. Move the deflection yoke to the rear and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each side. (See Fig.3-1 - 3-3)
5. Move the deflection yoke forward and adjust so that entire screen is red. (See Fig.3-1)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig.3-4)

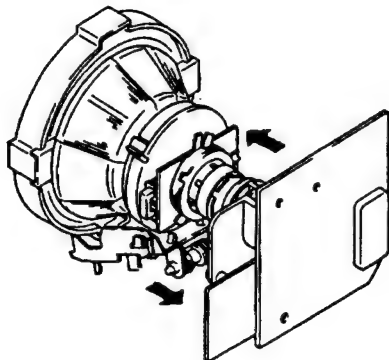


Fig.3-1

- Carry out the following adjustments in this order :
 1. Beam landing
 2. Convergence
 3. Focus
 4. White balance

Note: Testing equipment required.

1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

Fig.3-2

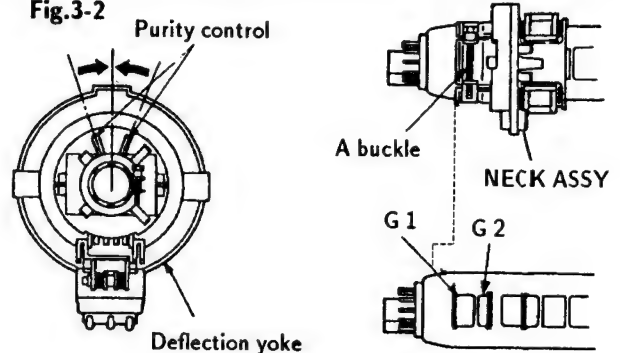


Fig.3-3

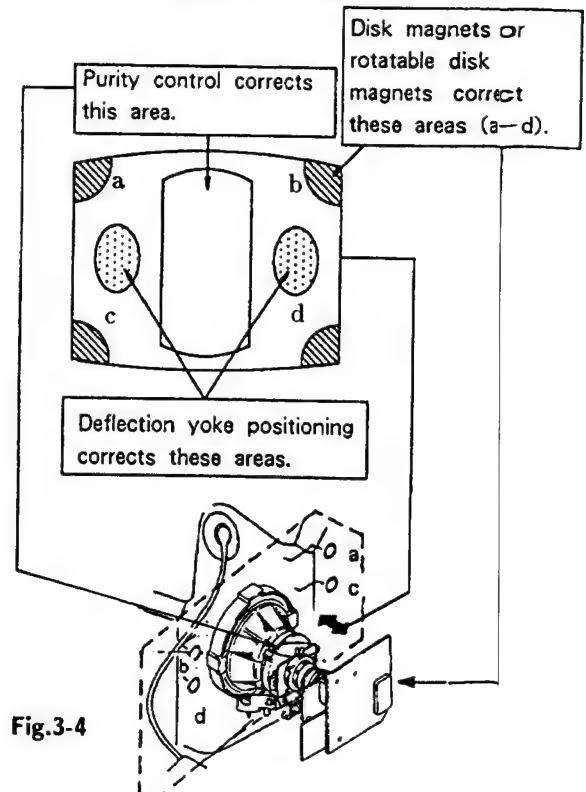
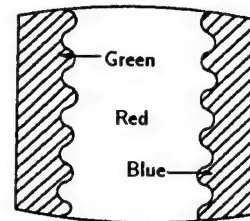


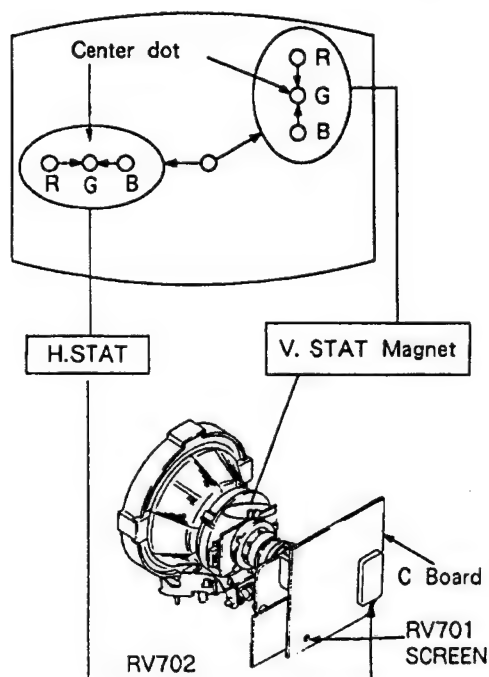
Fig.3-4

3-2. CONVERGENCE

Preparations :

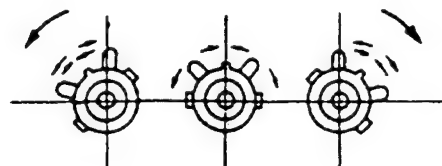
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

(1) Horizontal and vertical static convergence

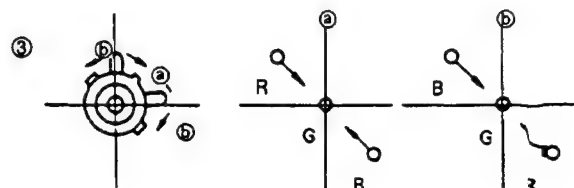
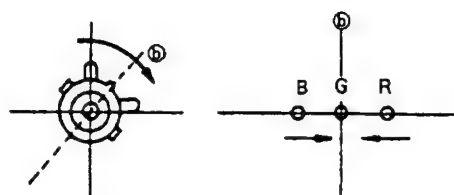
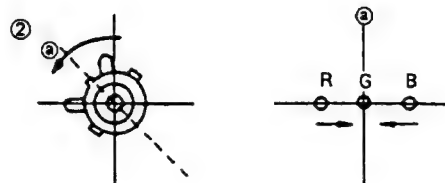
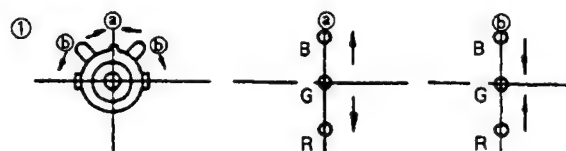


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V. STAT magnet in the manner given below.
(In this case, the H.STAT variable resistor and the V. STAT magnet influence each other)

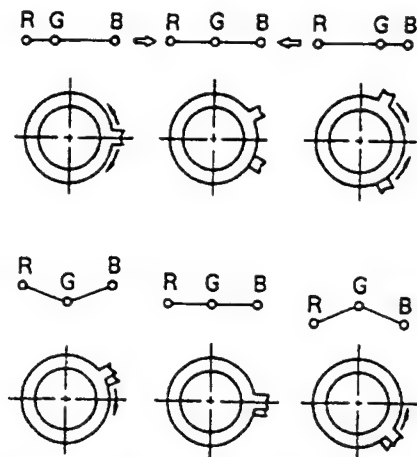
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



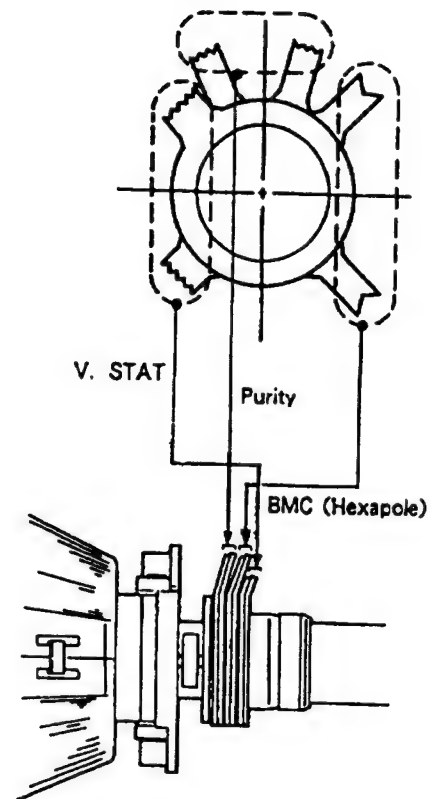
4. If the V.STAT magnet is moved in the direction of the ① and ② arrows, the red, green, and blue points move as shown below.



● Operation of BMC (Hexapole) Magnet



- The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking.
Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).

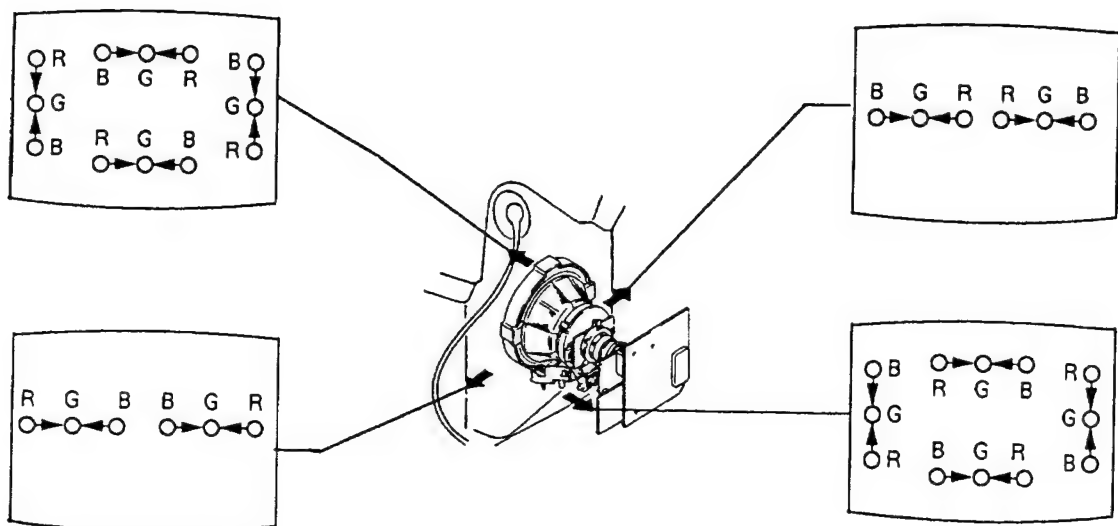


(2) Dynamic convergence adjustment

Preparations :

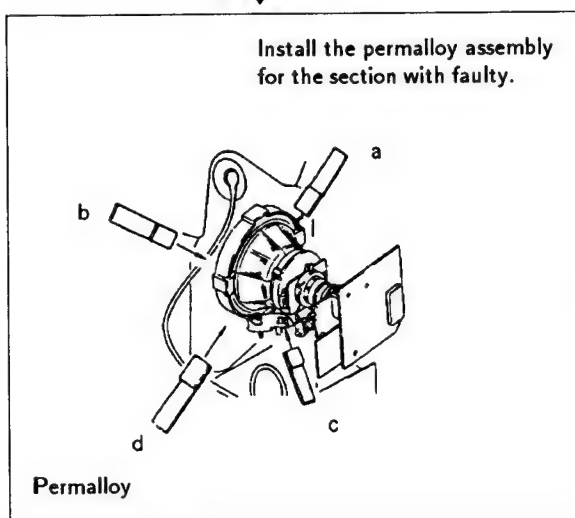
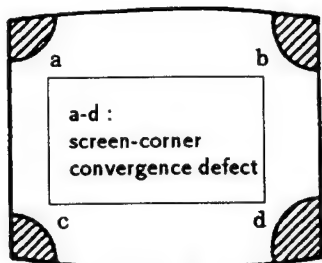
- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
1. Slightly loosen the deflection yoke screws.

2. Remove the deflection yoke spacer.
3. Move the deflection yoke as shown in the figure below and optimize the convergence.
4. Tighten the deflection yoke screws.
5. Install the deflection yoke spacer.



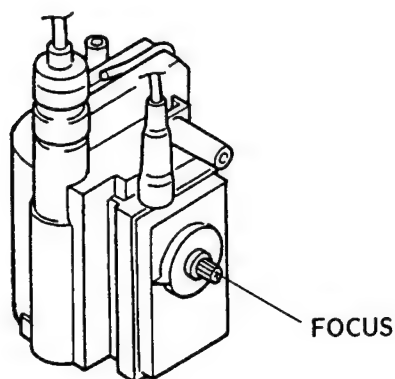
(3) Screen corner convergence

If you cannot adjust corner convergence properly, correct them with permalloy.



3-3. FOCUS

Adjust the focus to optimize the screen.



3-4. WHITE BALANCE

Screen G2 Setting

1. Input the dot signal from the pattern generator.
2. Set the picture brightness control to its lowest level.
3. Apply 180V DC to the R,G, and B cathodes with an external power supply.
4. While watching the picture, adjust G 2 control RV 701 (Screen) to the point just before the return lines disappear.

White balance adjustment

1. Receive all-white signal.
2. Enter into service mode. (Refer to the section 4 "Electrical Adjustment" to how to enter service mode.)
3. Select CXA1587S on menu.

09	SUB BRIGHT	ADJ.
10	SUB HUE	7
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.
16	G-AUTO CUT OFF	ADJ.
17	B-AUTO CUT OFF	ADJ.
18	R-MANUAL CUT OFF	ADJ.
19	G-MANUAL CUT OFF	ADJ.
20	B-MANUAL CUT OFF	ADJ.

4. Set picture to MAX.
5. Adjust G-DRIVE B-DRIVE with buttons so that the white balance becomes optimum.
6. Press **OK** button to write the data for each item.
7. Set picture to MIN.
8. Adjust G-AUTO CUT OFF, B-AUTO CUT OFF, R-MANUAL CUT OFF, G-MANUAL CUT OFF and B-MANUAL CUT OFF with buttons so that the white balance becomes optimum.
9. Press **OK** button to write the data for each item.

SECTION 4

CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-831

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set while pressing any two buttons on the front panel.

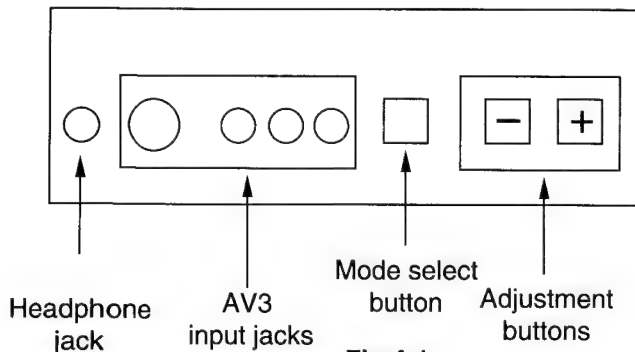


Fig.4-1

2. "TT" will appear at the upper right corner of the screen.

Command operation in service mode.

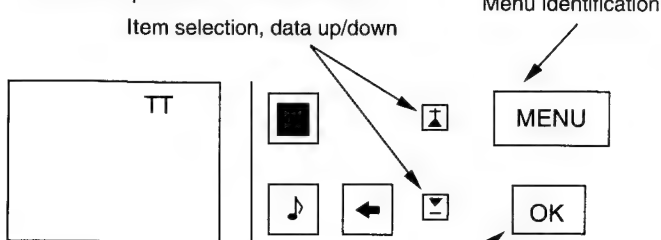


Fig.4-2

Fig.4-3

3. Press the MENU button on the remote commander to obtain the menu on the screen.

MAIN MENU
Programme Table
Video Connection
Picture Control
Sound Control
Timer
Preset
Language
> DEMO
Select < > and press OK

Fig.4-4

4. Press the ▲ and ▼ buttons on the remote commander and move > to DEMO.
5. Press [OK] button to proceed to the next menu.
6. The menu of fig. 4-5 will appear on the screen. Select the DEVICE corresponding to the adjustment item from the table on the next page.

DEVICES
Initialize
> CXA1587
CXD2018
TDA9145
CXA1526
TDA6612
CX7948A
P/P service
Select < > and press OK

Fig. 4-5

7. If adjustment item is CXA1587, press the ▼ button and move > to CXA1587.

CXA1587

Item No	Adjustment item	Data Amount
01	PICTURE	53
02	COLOR	31
03	BRIGHT	31
04	HUE	31
05	SHARPNESS	12
06	RGB PICTURE	7
07	SUB CONTRAST	ADJ.
08	SUB COLOR	ADJ.
> 09	SUB BRIGHT	ADJ.
10	SUB HUE	8
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.

8. Press [OK] button to get the next selection menu.
9. Press ▼ button and move > to the adjustment item and press [OK] button.
10. Press ▲ and ▼ buttons to change the data in order to comply with each standard.
11. Press [OK] button to write data.
12. Turn off the power to quit service mode when adjustments are completed.

CXA1587

Item No	Adjustment item.	Data Amount
01	PICTURE	53
02	COLOR	31
03	BRIGHT	31
04	HUE	31
05	SHARPNESS	12
06	RGB PICTURE	7
07	SUB CONTRAST	ADJ.
08	SUB COLOR	ADJ.
09	SUB BRIGHT	ADJ.
10	SUB HUE	8
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.
16	G-AUTO CUT OFF	ADJ.
17	B-AUTO CUT OFF	ADJ.
18	R-MANUAL CUT OFF	ADJ.
19	G-MANUAL CUT OFF	ADJ.
20	B-MANUAL CUT OFF	ADJ.
21	GAMMA LEVEL	8
22	DC TRANSFER RATIO	3
23	DYNAMIC PICTURE	2
24	Y FILTER ADJ	ADJ.
25	Y DELAY TIME	15
26	Y DELAY SWITCH 1	0
27	Y DELAY SWITCH 2	1
28	SHARPNESS LIMIT	ON
29	TRAP	OFF
30	H SHIFT	36
31	DA TEST	ON
32	PRE/OVER	12
33	SUB FOCUS	2
34	SUB SHARPNESS	3
35	R MUTE	OFF
36	G MUTE	OFF
37	B MUTE	OFF
38	AGING 1 WHT	OFF
39	AGING 2 BLK	ON
40	AKB OFF	ON
41	INHIBIT RGB	ON
42	FORCED RGB	OFF
43	V/2 V	OFF
44	AXIS	PAL
45	HUE OFF	OFF
46	V EXTENSION	OFF
47	AFC 1	1
48	AFC 2	0
49	AFC	OFF
50	REF. POSITION	0

CXD2018

Item No	Adjustment item.	Data Amount
01	V SIZE	ADJ.
02	V SHIFT	ADJ.
03	S CORRECTION	ADJ.
04	V LINEARITY	ADJ.
05	H SIZE	ADJ.
06	PIN AMP	ADJ.
07	TILT	ADJ.
08	UPPER CORNER	ADJ.
09	LOWER CORNER	ADJ.
10	V BOW	ADJ.
11	ANGLE	ADJ.
12	HV COMP. V	12
13	HV COMP. H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAN	OFF
19	INTERLACE	ON
20	H SHIFT	26
21	N/S CORRECTION	ADJ.

Typical On Screen Display based values when receiving PAL Phillips pattern.

TDA6612	ADJ
Stereo-Separation	(31)

Should be adjusted twice, once for 4 : 3 and once for 16 : 9 mode.

Y FILTER ADJUSTMENT

1. Input a PAL RED pattern.
2. Connect an oscilloscope to pin ① of CN0403 (R OUT) on C board.
3. Enter into service mode and press 3,8.
4. Adjust data by Δ or ∇ to minimize the chroma element at CN0403 pin ①.

SUB BRIGHTNESS ADJUSTMENT

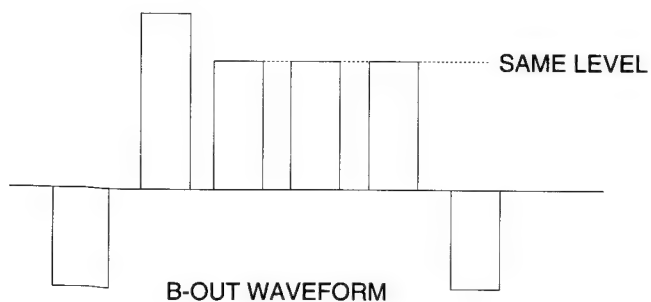
1. Input a Phillips pattern.
2. Enter into service mode and press 23.
3. Adjust data so that 0-IRE of grey scale and CUT-OFF 20-IRE are only slightly visible on screen.

SUB CONTRAST ADJUSTMENT

1. Input a video that contains a small 100% area on a Black Background.
2. Enter into service mode and press 01 to have PIC max followed by 21.
3. Connect oscilloscope to pin ① of CN0403 (R OUT) and adjust data to obtain 2.5Vp-p.

SUB COLOR ADJUSTMENT

1. Input a PAL color bar signal.
2. Connect an oscilloscope to pin ③ of CN0403 (B OUT) on the C board.
3. Enter into service mode and press 22 of CXA1587, 8 SUB COLOR.
4. Adjust data so that the right sides of the waveform are set to the same level.

**STEREO-SEPARATION ADJUSTMENT**

1. Input a 1kHz stereo signal to the L-ch and a 400Hz stereo signal to the R-ch.
2. Enter into service mode and press 19.
3. Adjust data so that sound is not detected in the Right-ch and the Left-ch.

DRIVE AND CUT-OFF

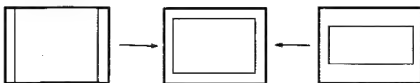
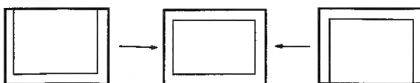
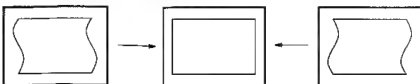
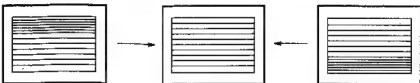
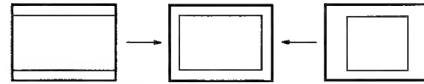
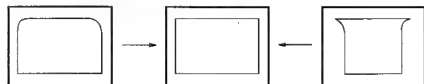
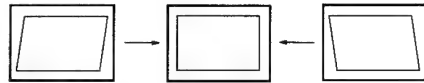
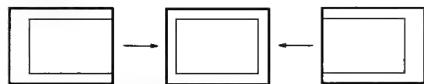
See direct test mode list attached and refer to sub brightness or such for adjustment method.

DEFLECTION SYSTEM ADJUSTMENT

1. Enter into service mode and select CXD2018.
2. Select and adjust each item in order to obtain the optimum image.

CXD2018

Item No	Adjustment item.	Data Amount
01	V SIZE	ADJ.
02	V SHIFT	ADJ.
03	S CORRECTION	ADJ.
04	V LINEARITY	ADJ.
05	H SIZE	ADJ.
06	PIN AMP	ADJ.
07	TILT	ADJ.
08	UPPER CORNER	ADJ.
09	LOWER CORNER	ADJ.
10	V BOW	ADJ.
11	ANGLE	ADJ.
12	HV COMP. V	12
13	HV COMP. H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAN	OFF
19	NON INTERLACE	ON
20	H SHIFT	26
21	N/S CORRECTION	ADJ.

V SIZE**V SHIFT****S CORRECTION****V LINEARITY****H SIZE****PIN AMP****TILT****UPPER CORNER PIN****LOWER CORNER PIN****V BOW****ANGLE****H SHIFT****N/S CORRECTION**

3. Press **OK** button to write data.

If the menu display prevents accurate adjustment, press to clear, to resume, press once again.

4-2. VOLUME ELECTRICAL ADJUSTMENTS

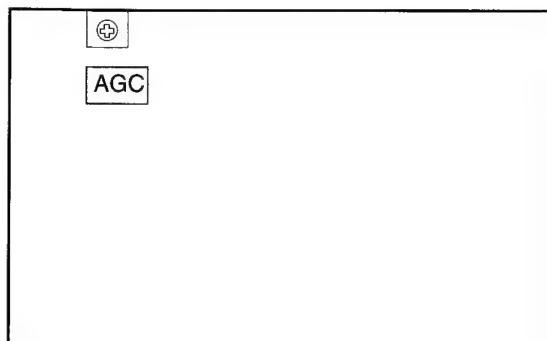
+B (+135V) ADJUSTMENT (RV601)

D BOARD



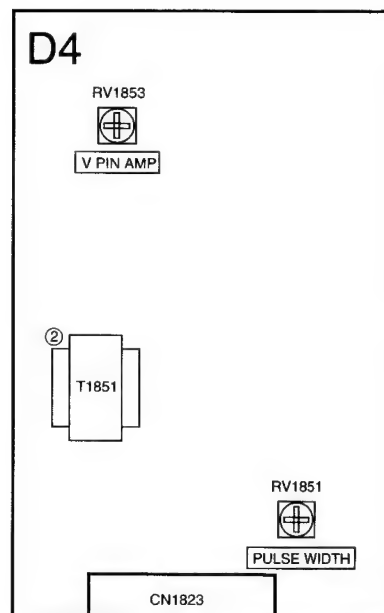
1. Switch on the power to the TV set.
2. Connect a digital multi-meter to pin ① of CN0529 on D board.
3. Adjust RV601 on D board to $+135V \pm 0.5V$.

AGC ADJUSTMENT (IF BLOCK)

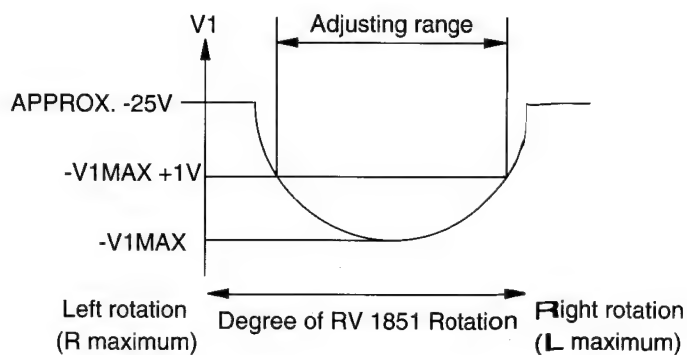


1. Receive an off-air signal.
2. Adjust the AGC VR so that there is no snow noise or cross-modulation visible on the screen.
3. Change the receiving channel and confirm status.

PULSE WIDTH & V-PIN ADJUSTMENTS (RV 1851/1853)



1. Connect an oscilloscope to pin ② of T1851.
2. Preset RV-1853 to center of its range (mechanical center).
3. Adjust RV-1851 to obtain minimum amplitude.
4. Switch the oscilloscope input to D.C. and adjust RV-1853 to obtain $-33.2 \pm 0.5V$.



4-3. TEST MODE 2 :

Is available by pressing Test button twice, OSD 'TT' appears. The functions described below are available by pressing the two numbers. To release the Test Mode 2, press 0 twice, or switch the TV into Stand-by Mode.

00	switch Test Mode 2 off
01	picture maximum
02	picture minimum
03	Volume 35%
04	Volume 50%
05	Volume 65%
06	Volume 80%
07	Ageing Condition (Volume min., Picture max., Brightness max., Ageing 2 Mode of CXA1587, TDA2595 is locked to CXA1587 via PIN 34 of μ -Con.)
08	Shipping Condition (Analog Values are RESET due to factory setting, Prog 1 is selected, TT Mode is switched off)
09	dummy
10	Tenth entry is deleted
11	Balance
12	Hue
13	Display of Software Version and TV set configuration
14	Adjustment of N/S Correction
15	Read factory setting from NVM Reads Volume, Balance, Treble, Bass, Brightness, Contrast, Hue, Sharpness, Colour values from ROM to the actual used values (Last Power Memory)
16	Save actual used values as RESET values Memorize actual used values Balance, Treble, Bass, Hue, Sharpness at RESET position in NVM.
17	Preset Level for AV Sources
18	dummy
19	Stereo Separation
20	Tenth entry is deleted
21	Sub Contrast
22	Sub Colour
23	Sub Brightness
24-29	dummy

30	Tenth entry is deleted
31	Green Drive
32	Blue Drive
33	Green Cut Off (Auto Cut Off)
34	Blue Cut Off (Auto Cut Off)
35	Red Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
36	Green Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
37	Blue Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
38	Y-Filter adjustment (Trap is switched off and TDA9145 is switched in forced NTSC Mode)
39	dummy
40	Tenth entry is deleted
41	Default setting of CXA1587 (Only available in Prog 99)
42	Default setting of CXA2018 (Only available in Prog 99)
43	Default setting of CXA1526 (Only available in Prog 99)
44	(all Port High) Not yet
45	(all Port High) Not yet
46	IR Channel Presetting Mode The channel presetting can be done by a Special IR Transmitter
47-48	dummy
49	Erase the NVM Testbyte (this byte detects already stored NVM's) After selecting this function, switch TV Off and On -> the NVM will be preset by μ -Controller. (Not the channel data)

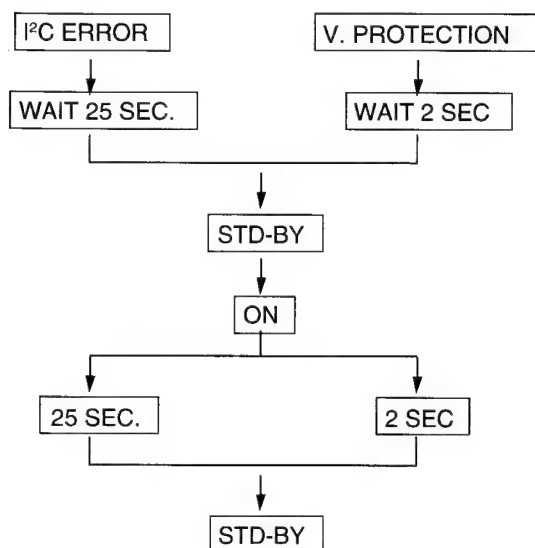
Note: For No 35, 36, 37 and 38 special pressing (AKB, forced Color Mode, Trap) is selected. After selecting a new Test Mode Number, the AKB is switched ON, the Trap is switched ON and TDA9145 is switched to Auto Search Mode.

In Test Mode 2 the Menu display is switchable by the Speaker-Off button.

4-4. ERROR MESSAGE

Self diagnostic system operates as follows.

- When the microprocessor is unable to receive an acknowledgement back from the device, the LED starts flashing according to the table below.



In the case of more than one error in parallel, the blinking error shows max priority according to the error number (e.g. error 2 and error 5 appear together, then LED,s show error 2).

ERROR TABLE

ERROR COUNT	IC TYPE	FUNCTION
1	I ² C BUS	SDA low
2	X24C16	EPROM
4	TDA9145	Colour decoder
5	CXA1587	RGB/Jungle
6	TDA6612	Sound processor
7	CXD2018	V deflection
8	CXA1545	AV switch
11	SDA5248	Text
13		V protection

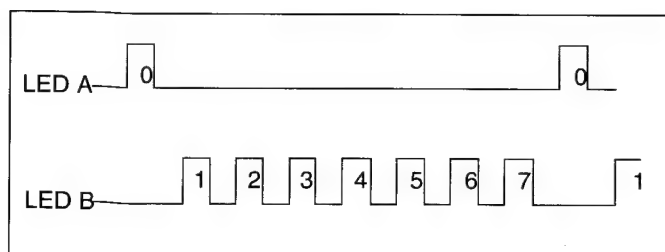
Stand By LED blinking

No 1K return

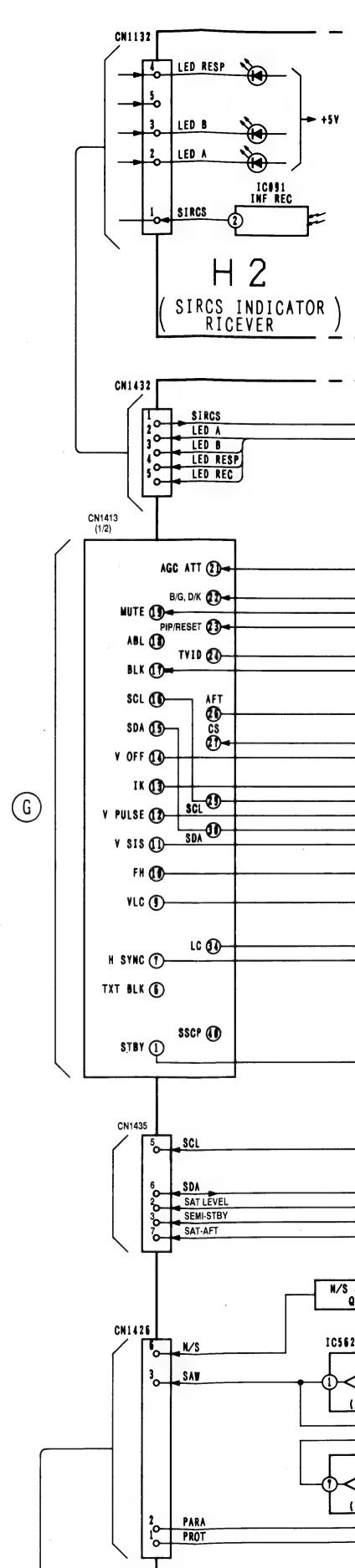
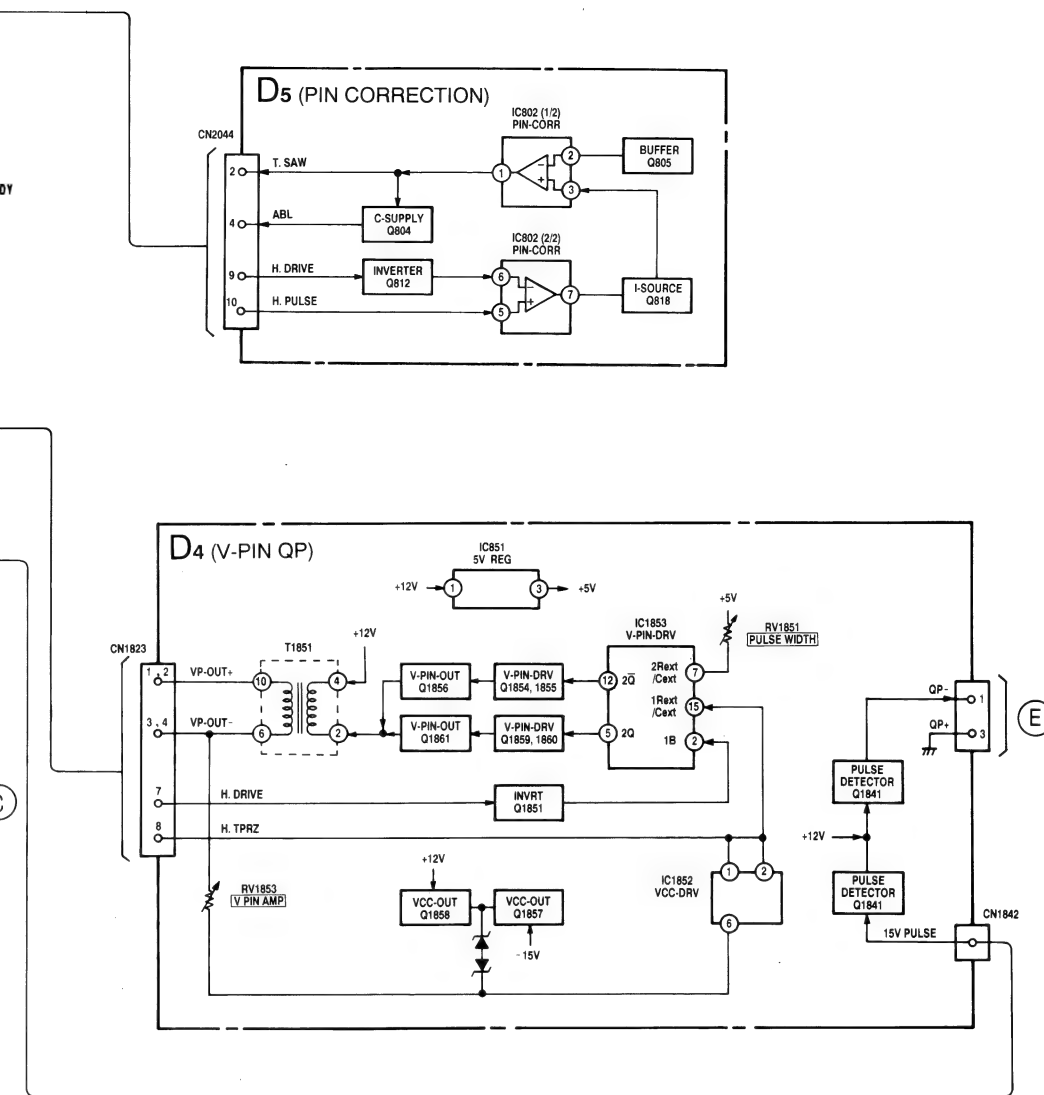
4-5. ERROR I²C BUS DIAGNOSTIC SYSTEM FOR AE2-B CHASSIS.

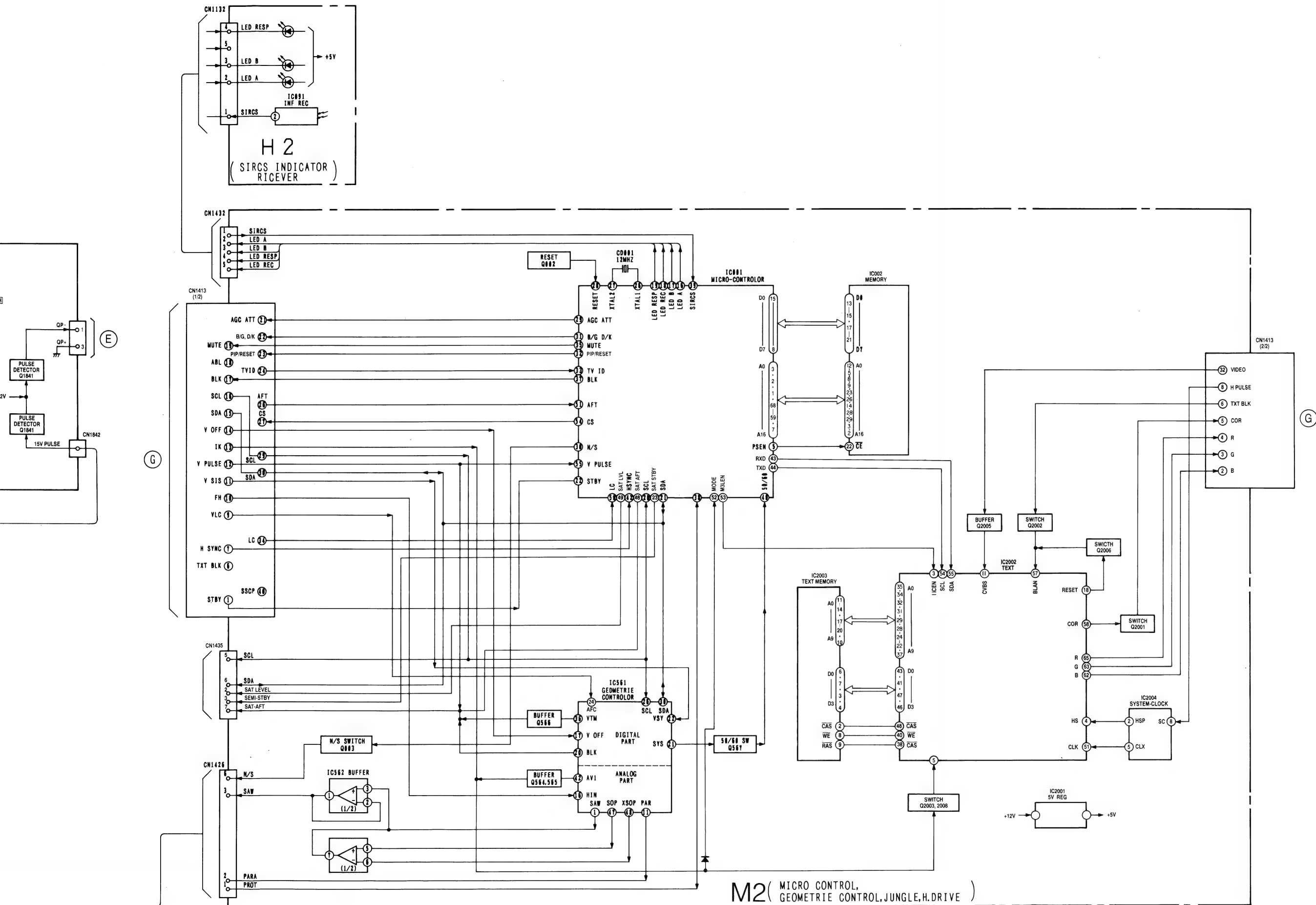
For all IC's used in the AE 2-B chassis which are necessary to obtain picture and sound there is an inbuilt I²C Bus diagnostic system.

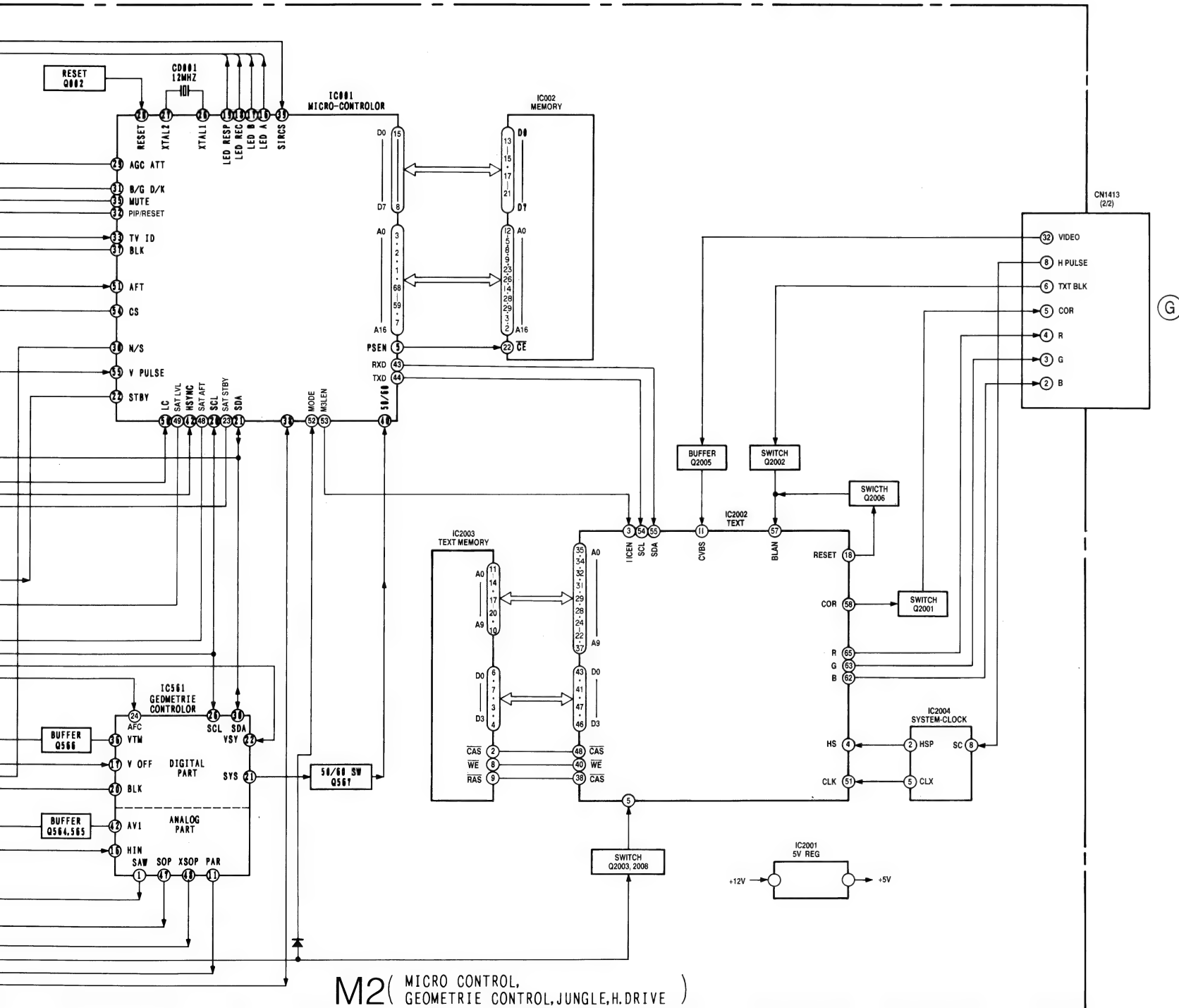
In the case of no acknowledge bit, LED A and LED B start blinking as shown.



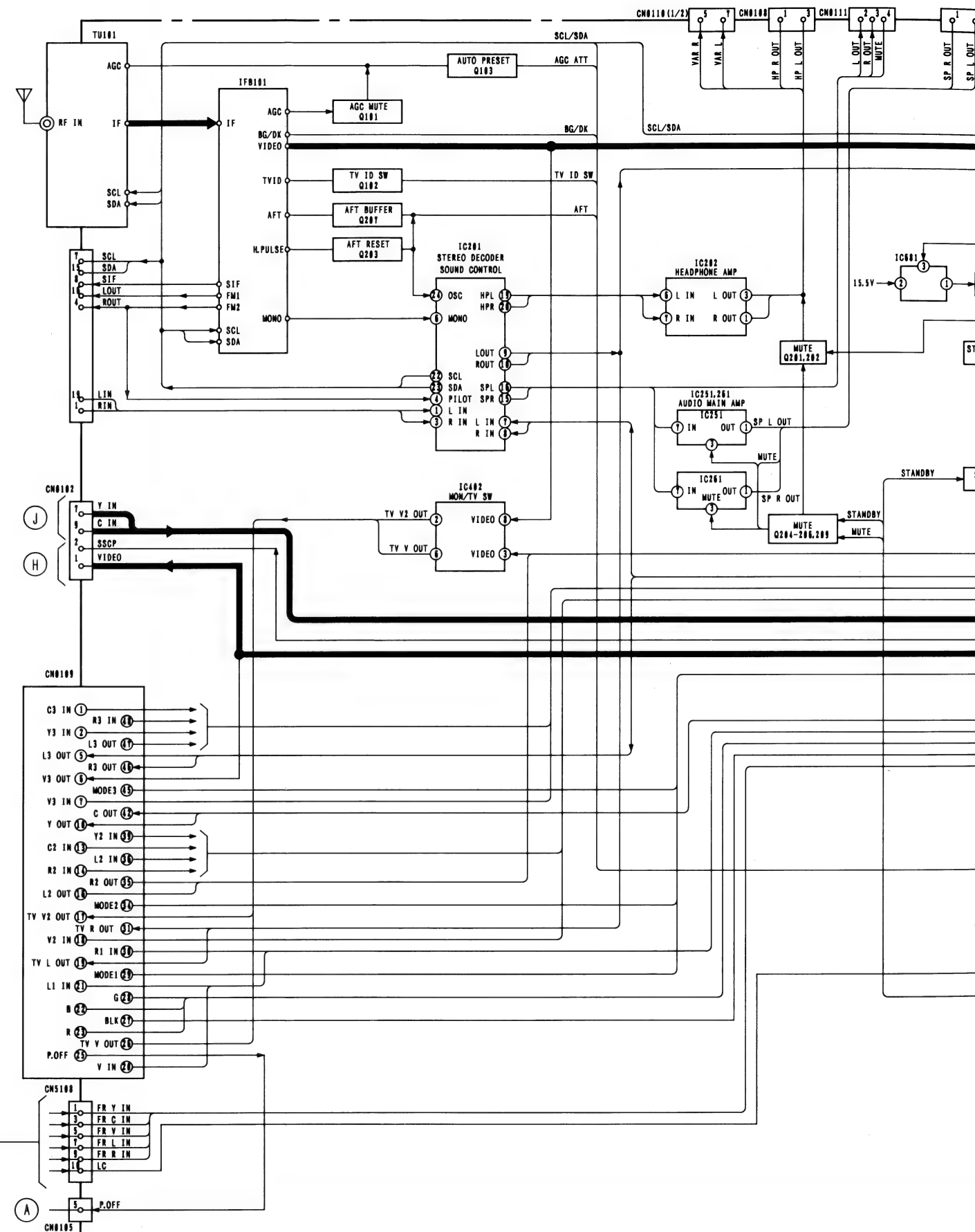
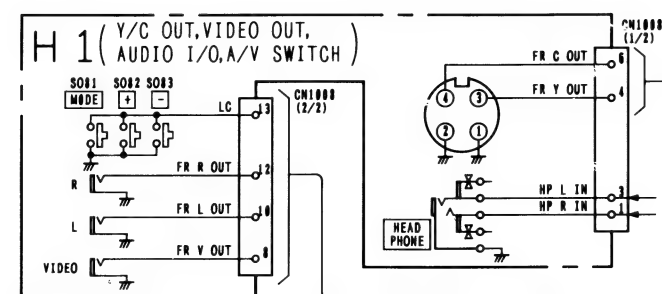
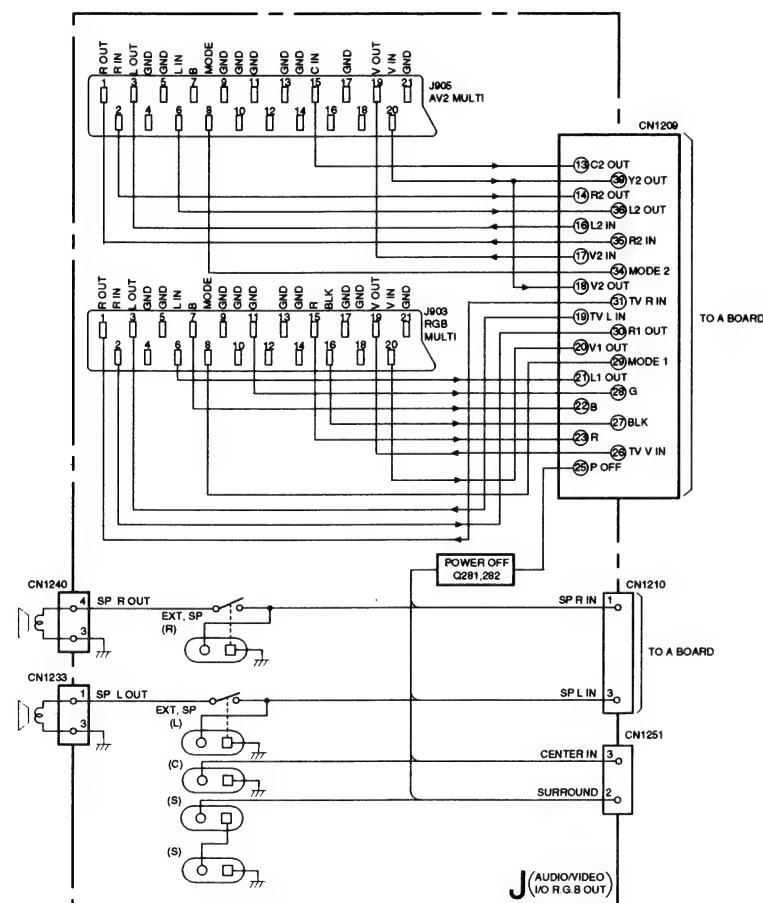
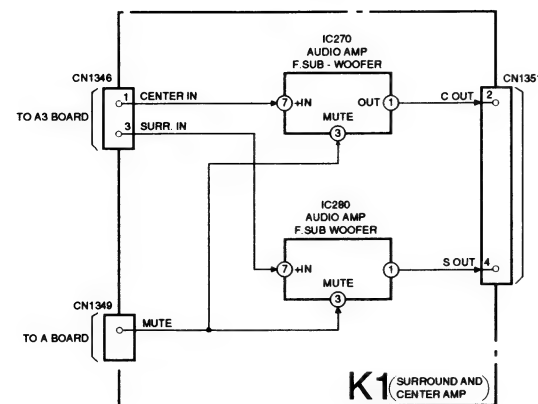
SECTION 5 DIAGRAMS

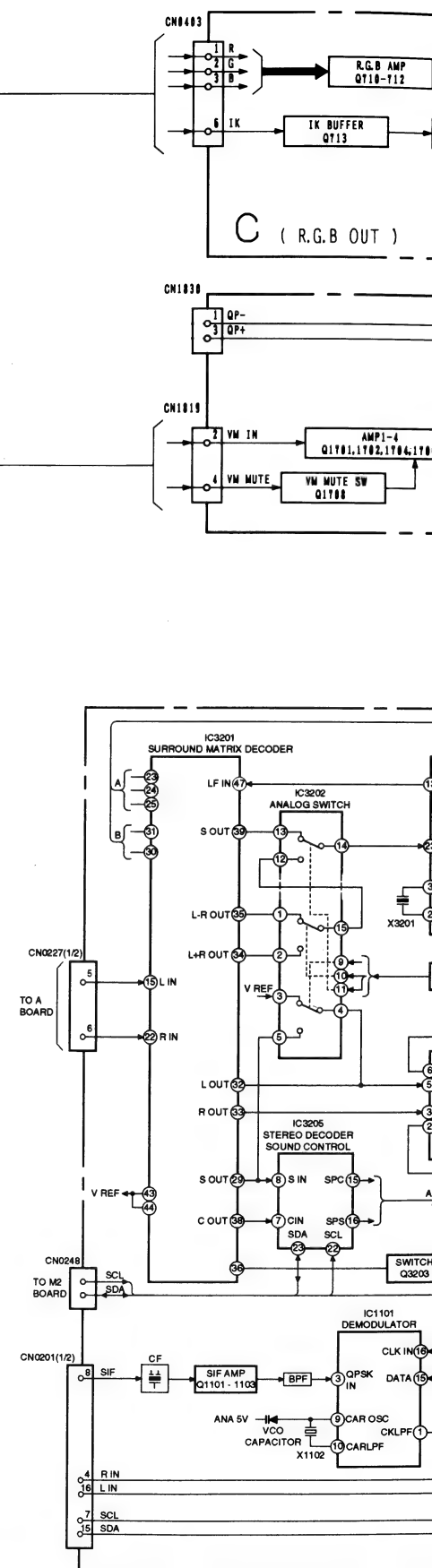
KV-A294

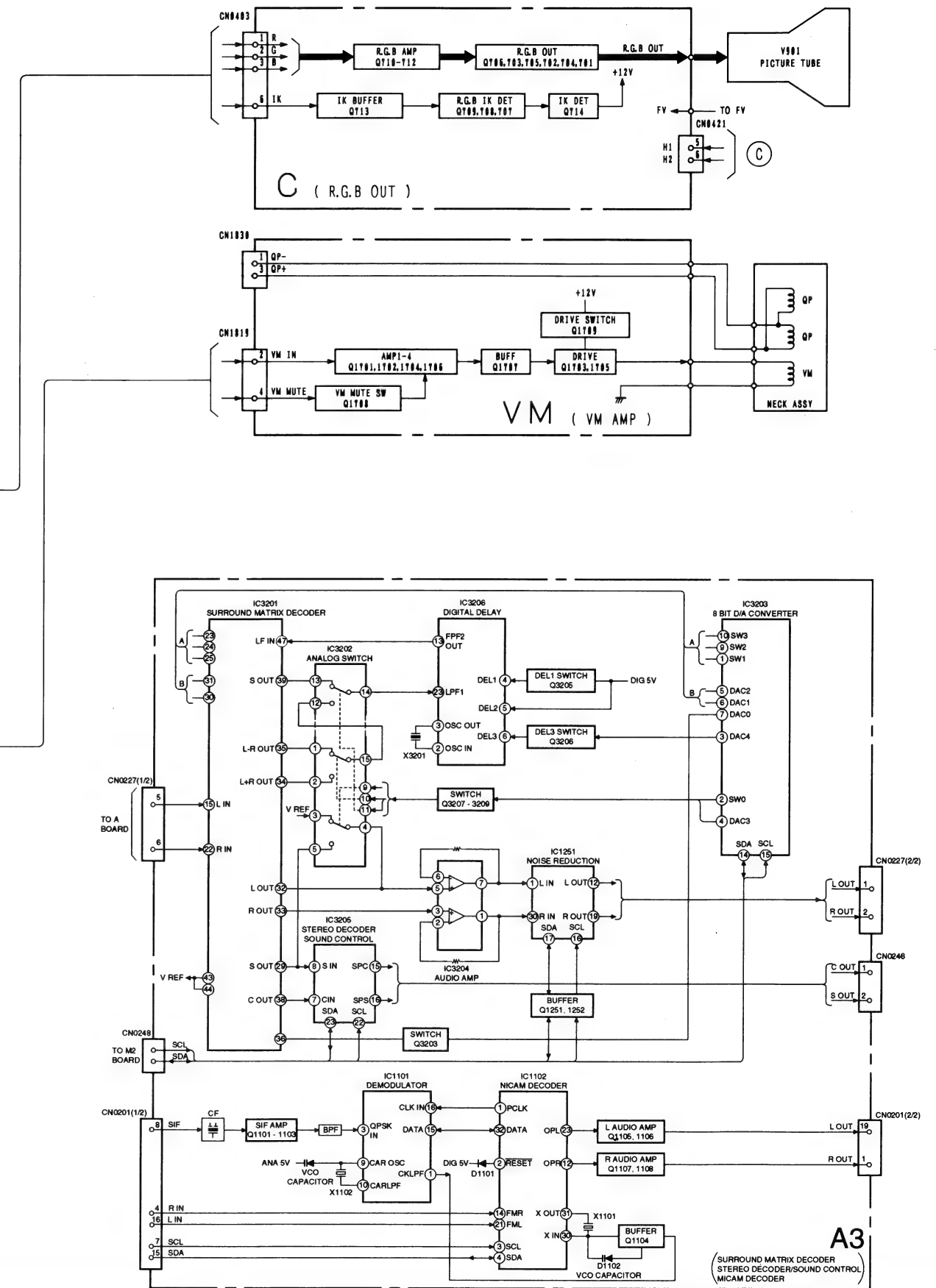
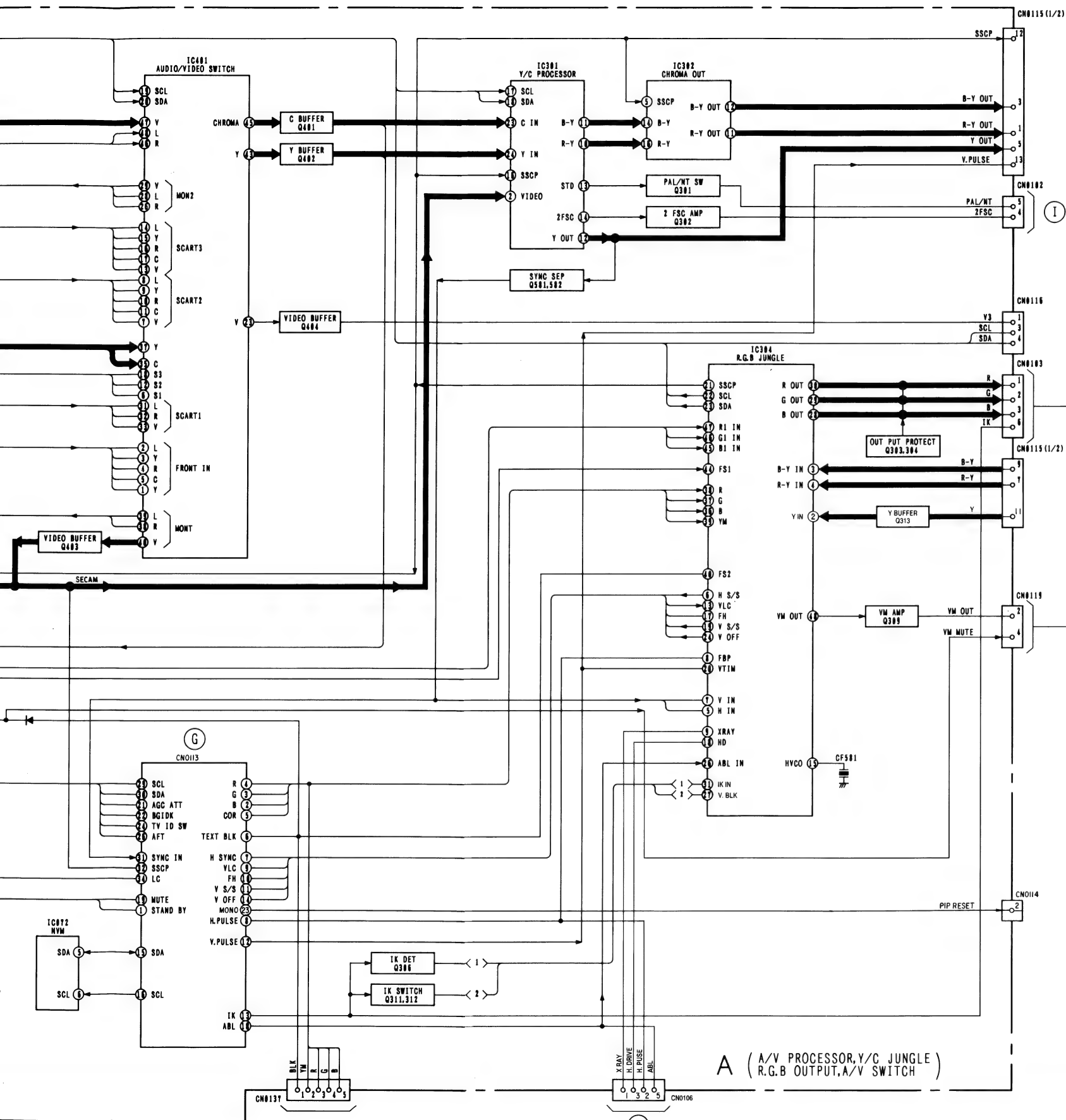




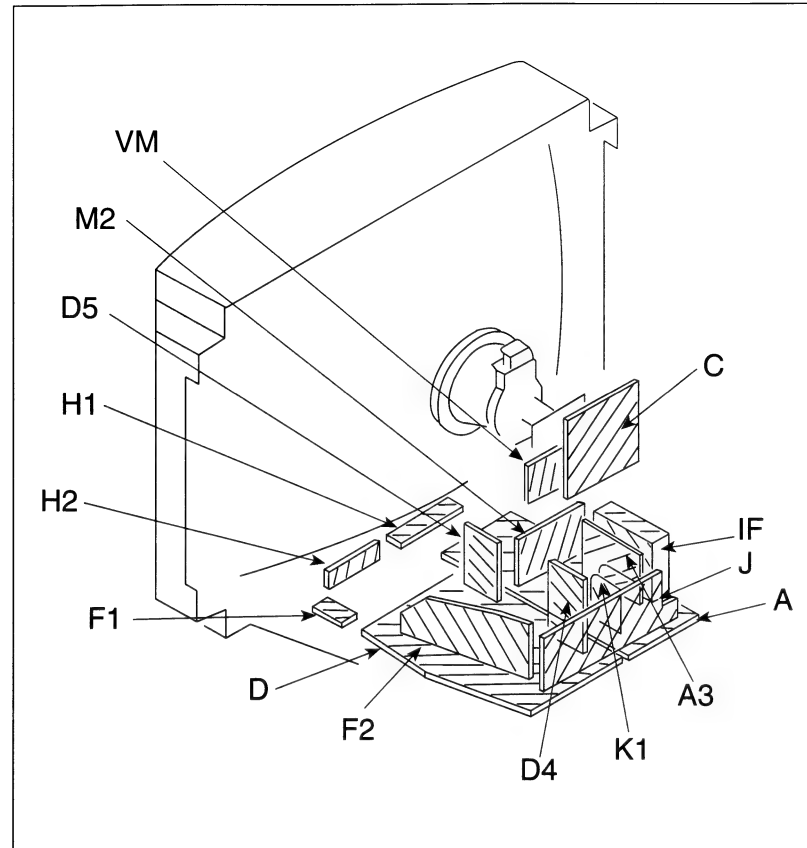
BLOCK DIAGRAM (2)









5-2. CIRCUIT BOARDS LOCATION



Reference information

RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NONFLAMMABLE CARBON
	FUSE	: NONFLAMMABLE FUSIBLE
	RS	: NONFLAMMABLE METAL OXIDE
	RB	: NONFLAMMABLE CEMENT
	RW	: NONFLAMMABLE WIREWOUND
	※	: ADJUSTMENT RESISTOR
COIL	LF-8L	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.









Note: Les composants identifiés par une trame et par une marque  sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.

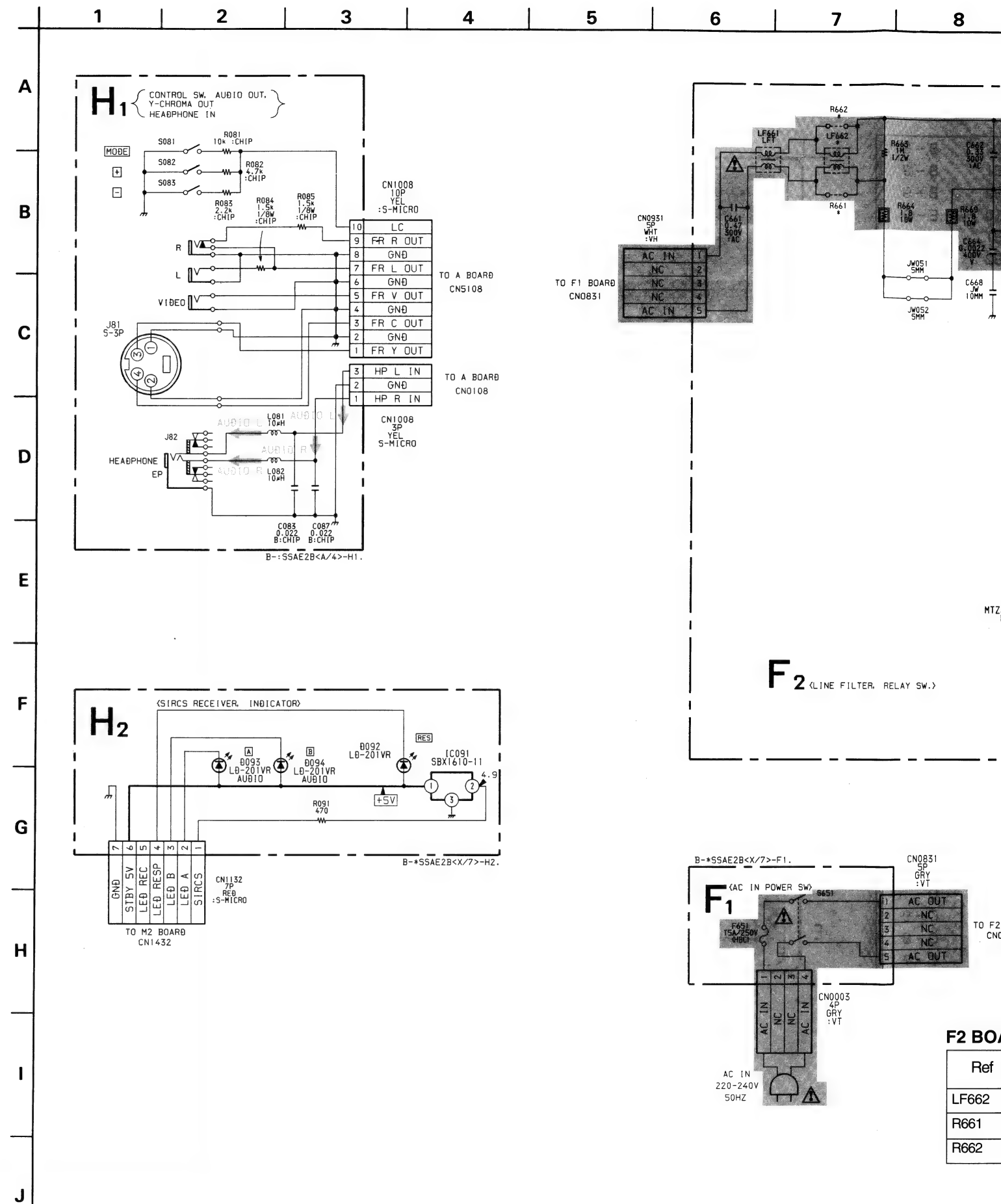
5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

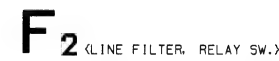
Note :

- All capacitors are in μF unless otherwise noted.
pF : $\mu \mu F$ 50WV or less are not indicated except for electrolytic.
- Indication of resistance, which dose not have one for rating electrical power, is as follows.

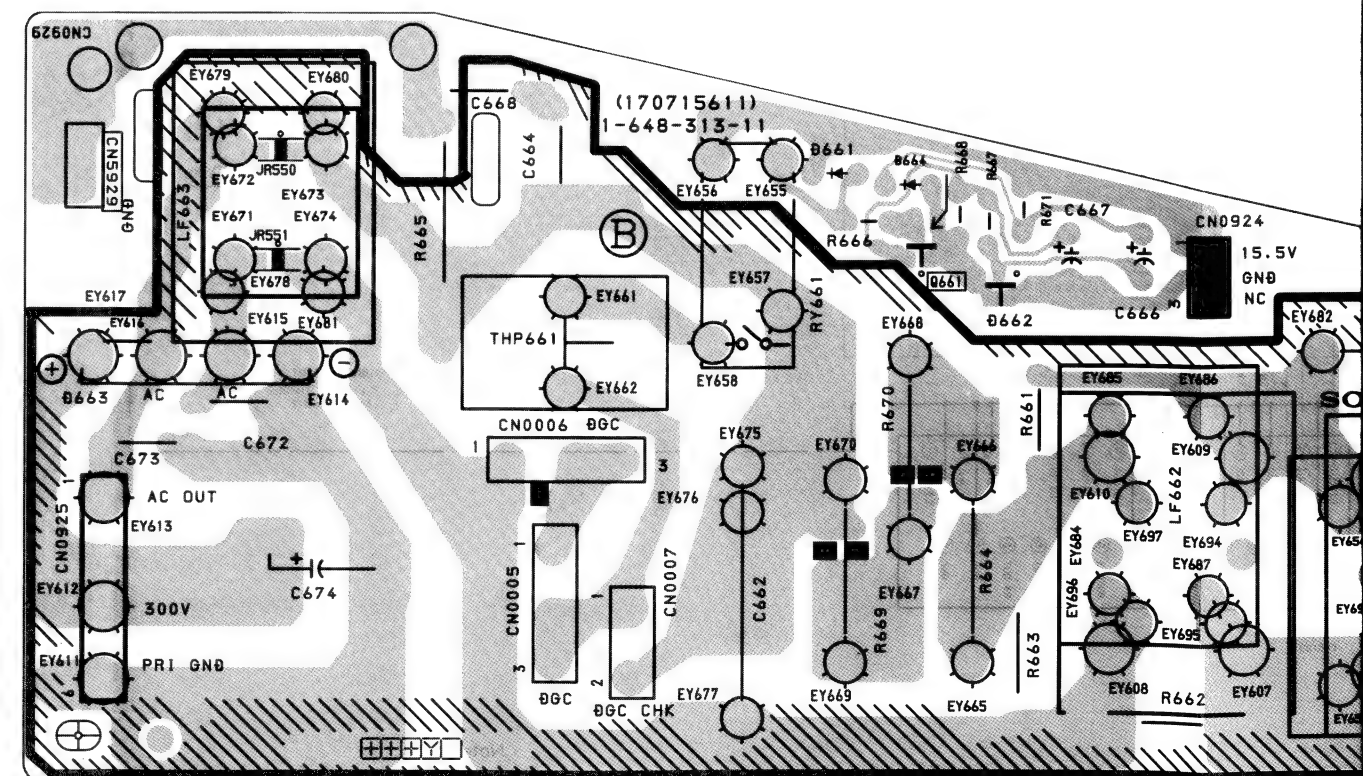
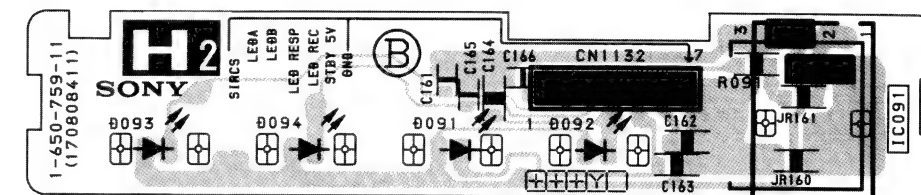
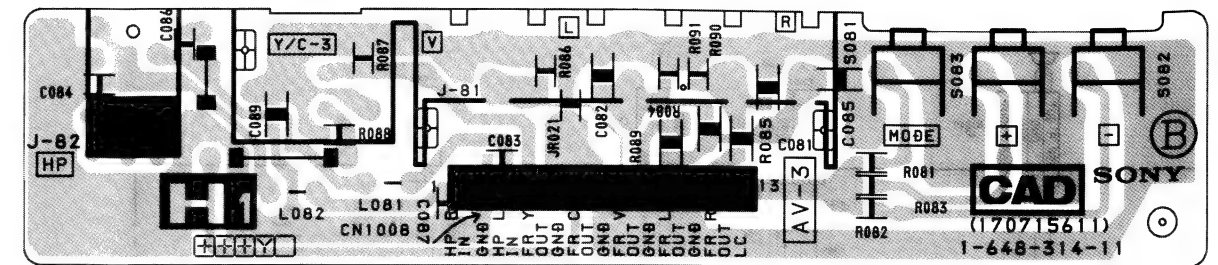
Pitch : 5mm
Rating electrical power : 1/4W

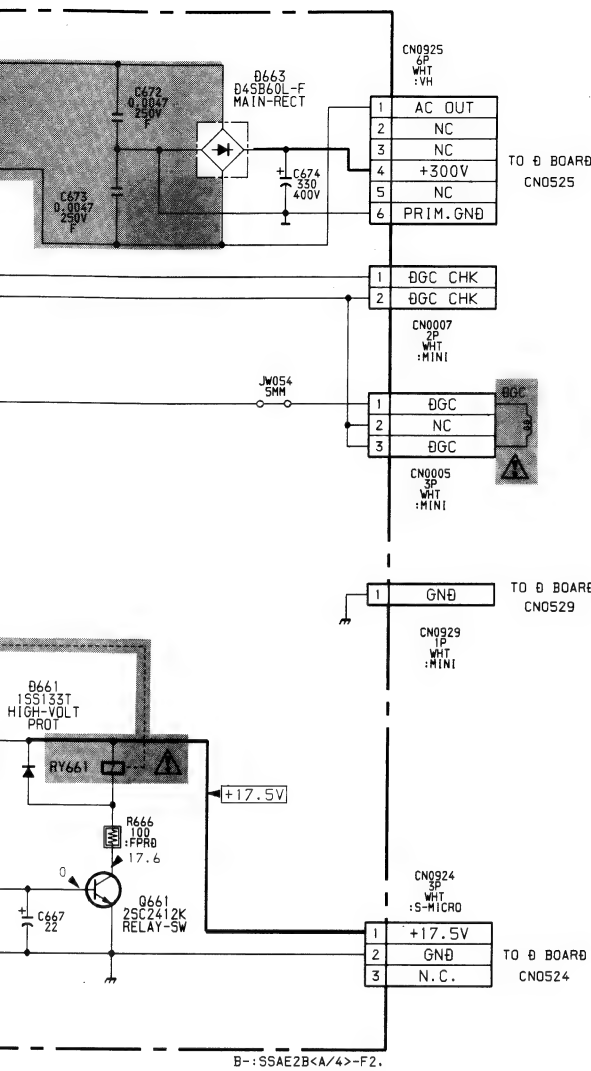
- Chip resistor is in 1/10W.
- All resistors are in ohms.
 $k\Omega = 1000\Omega$, $M\Omega = 1000K\Omega$
-  : nonflammable resistor.
-  : fusible resistor.
- Δ : internal component.
-  : panel designation or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All voltages are in V.
- Readings are taken with a 10M Ω digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
-  : B+ bus.
-  : B- bus.
-  : signal path.(RF)
-  : earth - ground
-  : earth - chassis





Ref	A2941A	A2941B	A2941D	A2943E	A294IK	A2942U
LF662	LFT	-	LFT	-	-	-
R661	-	JW 10MM	-	JW 10MM	JW 10MM	JW 10MM
R662	-	JW 10MM	-	JW 10MM	JW 10MM	JW 10MM





1B	A2941D	A2943E	A294IK	A2942U
	LFT	-	-	-
MM	-	JW 10MM	JW 10MM	JW 10MM
MM	-	JW 10MM	JW 10MM	JW 10MM

H1

[CONTROL SW, AUDIO OUT
Y - CHROMA OUT, HEADPHONE]

H2

SIRCS RECEIVER
INDICATOR

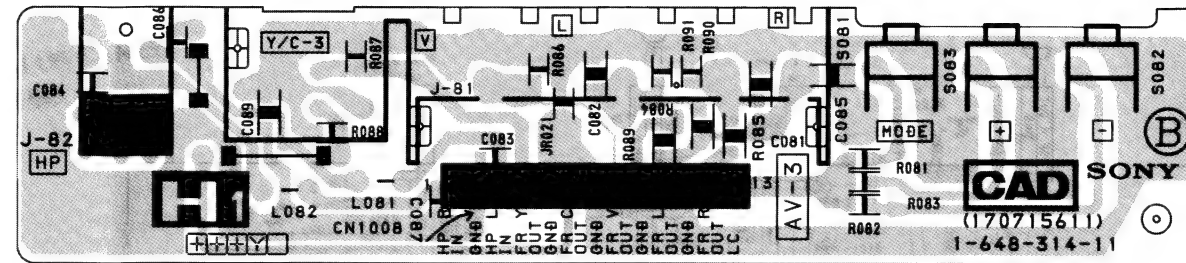
F2

[LINE FILTER,
RELAY SW

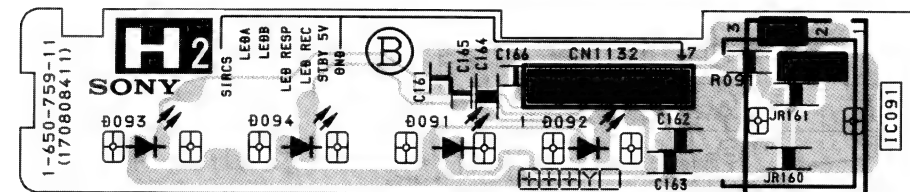
F1

[AC IN POWER SW]

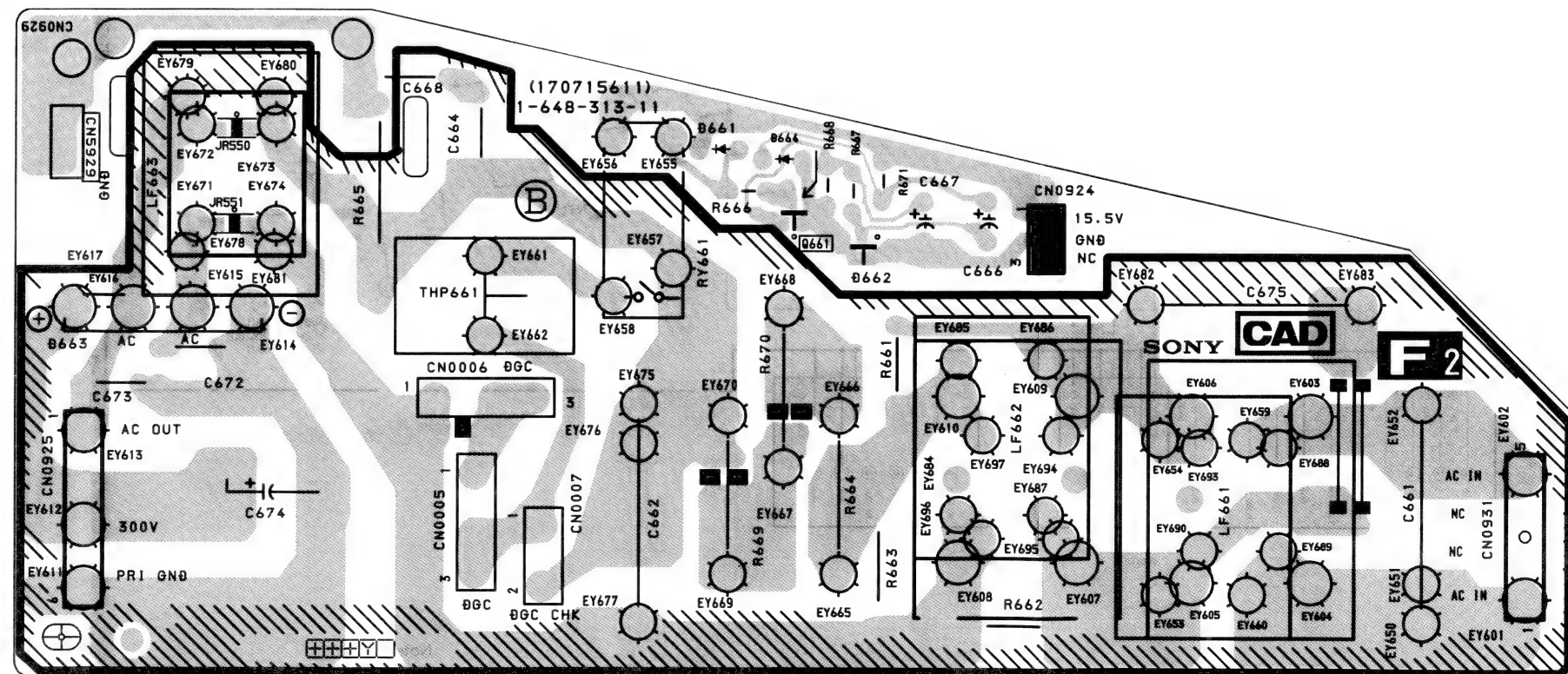
— H1 BOARD —



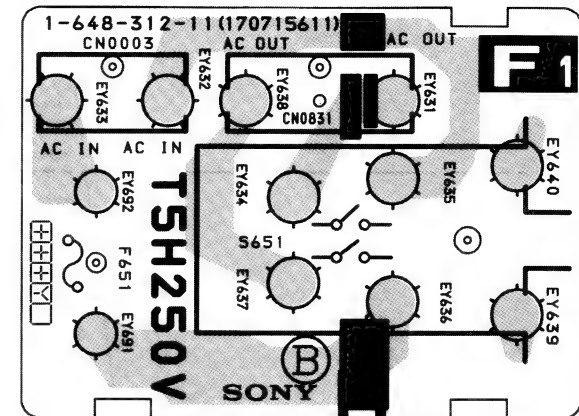
– H2 BOARD –



– F2 BOARD –



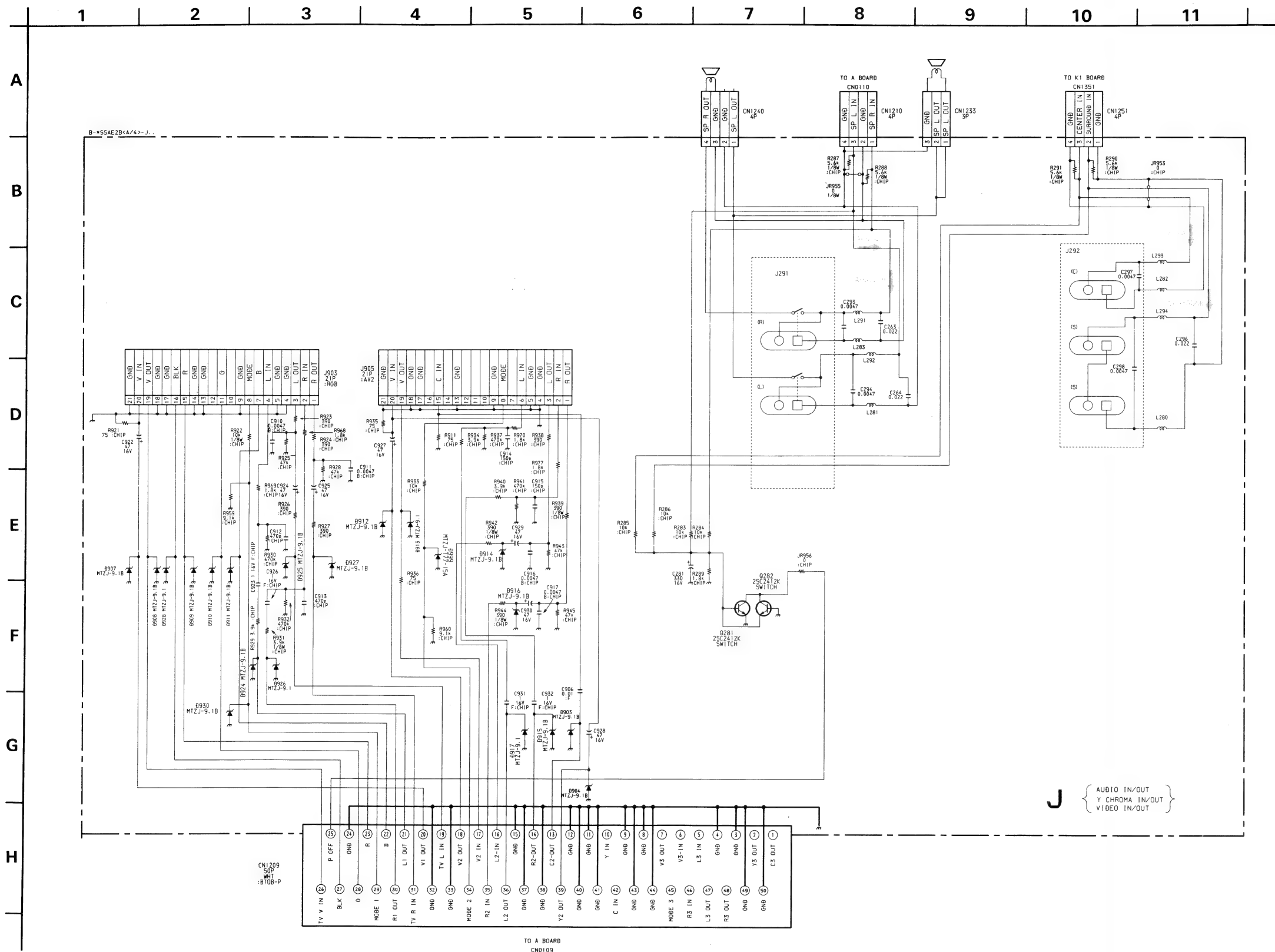
– F1 BOARD –



J

AUDIO IN/OUT
Y - CHROMA IN/OUT
VIDEO IN/OUT

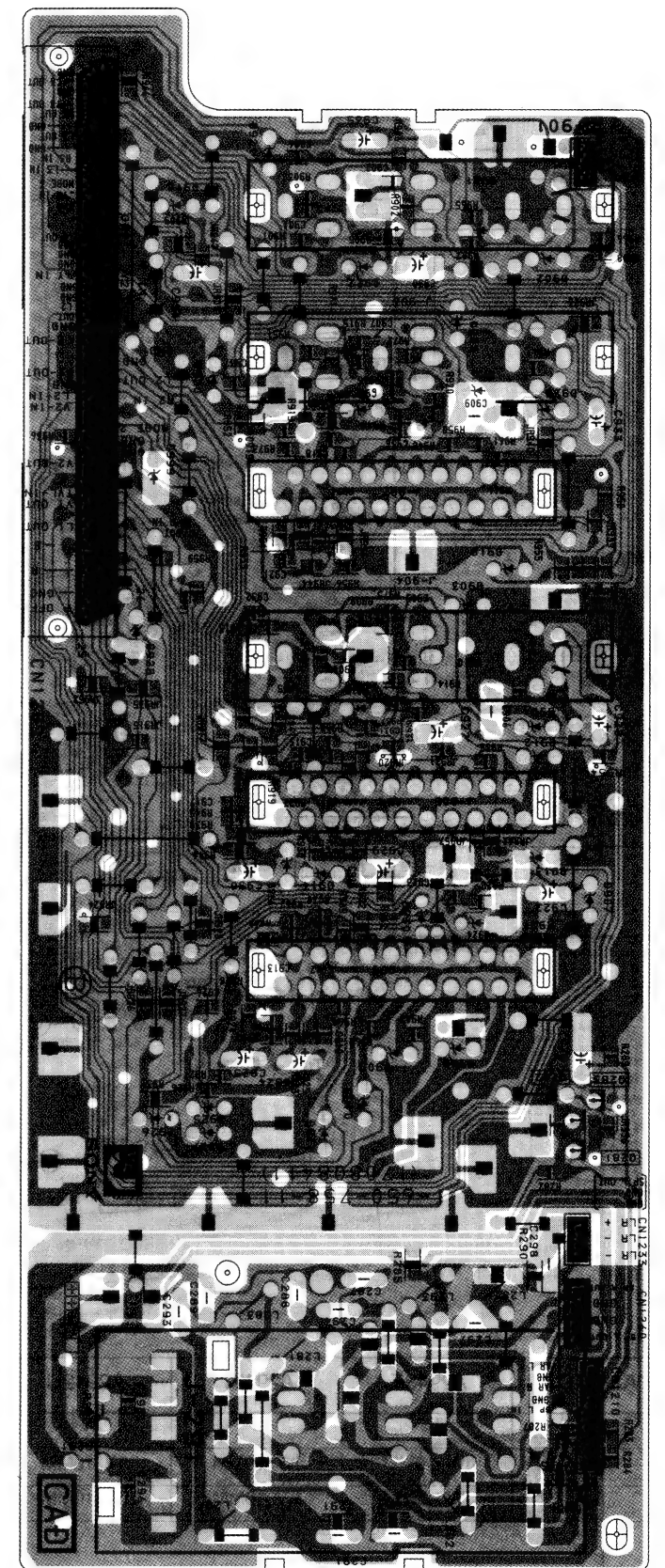
A

TUNER AUDIO CONTROL,
AV SW, R.G.B. JUNGLE, Y.

Note :

- Pattern from the side which enables seeing.
- Pattern of the rear side.

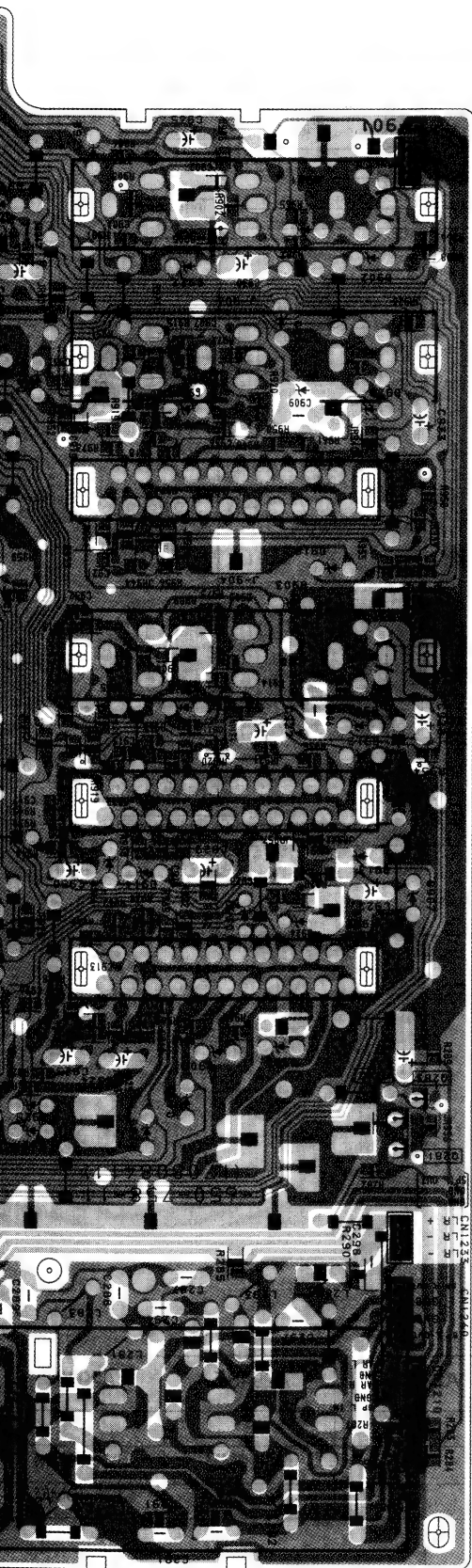
- J BOARD -



D IN/OUT
HROMA IN/OUT
D IN/OUT

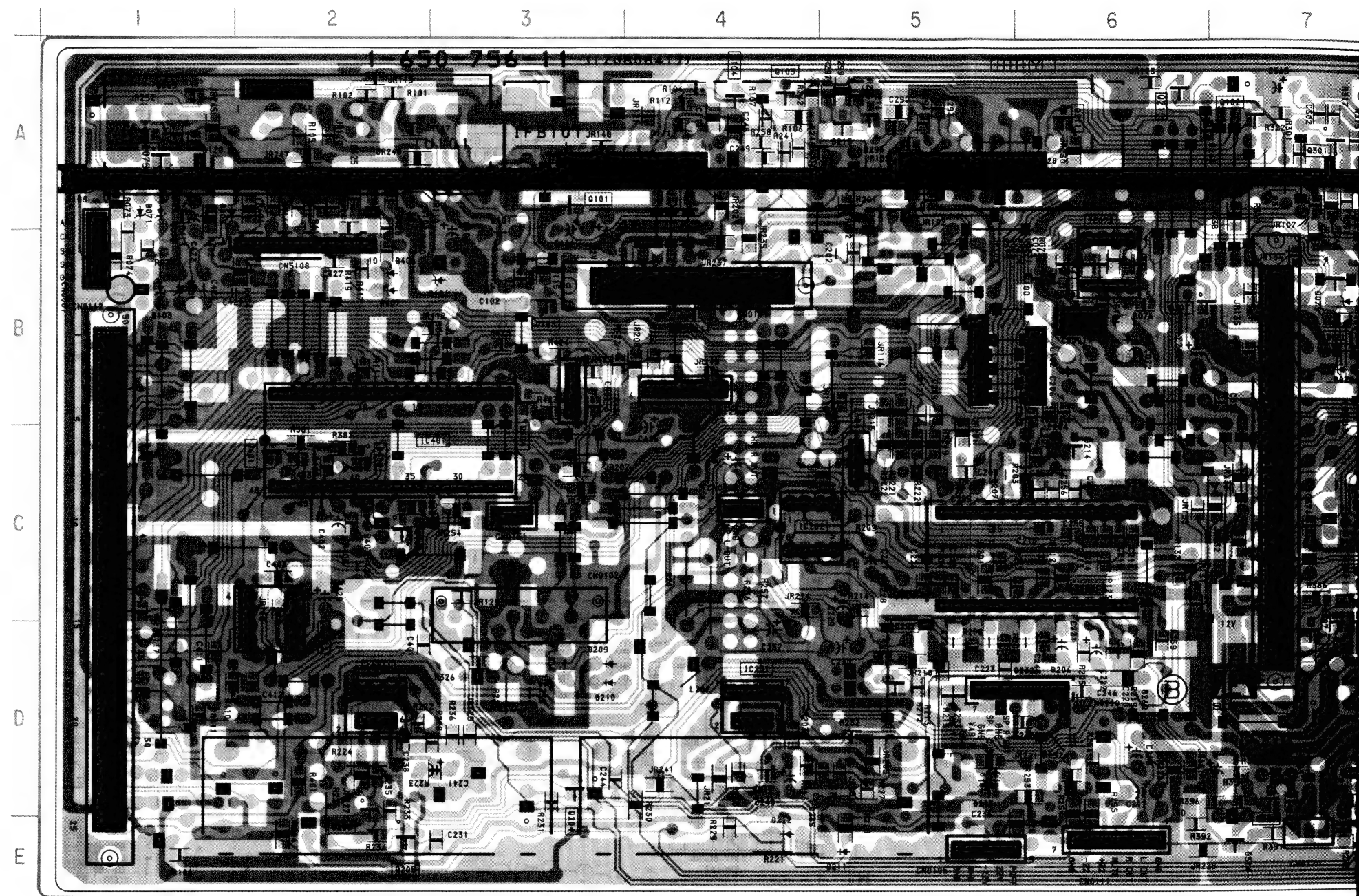
A

TUNER AUDIO CONTROL, AUDIO AMP
AV SW, R.G.B. JUNGLE, Y/C PROCESSOR



IC		Q404 B - 3	
IC072	B - 6	Q581	B - 9
IC201	C - 6	Q582	B - 9
IC202	C - 4	Q610	E - 9
IC251	D - 4	Q681	E - 7
IC261	D - 2	Q682	D - 9
IC301	A - 8	DIODE	
IC302	A - 10		
IC304	C - 10	D068	B - 7
IC401	C - 2	D069	A - 1
IC402	D - 2	D071	A - 1
IC681	D - 9	D073	A - 1
IC684	C - 4	D075	A - 1
IC685	E - 8	D077	B - 7
TRANSISTOR		D078	B - 7
Q071	D - 8	D079	B - 7
Q101	A - 3	D101	B - 2
Q102	A - 7	D206	D - 7
Q103	A - 3	D207	E - 7
Q201	D - 5	D208	D - 7
Q202	D - 5	D209	D - 3
Q203	A - 4	D210	D - 3
Q204	D - 3	D211	E - 5
Q205	E - 2	D212	E - 4
Q206	D - 2	D213	D - 5
Q207	B - 6	D214	C - 6
Q209	E - 7	D301	B - 9
Q210	A - 6	D302	A - 9
Q301	A - 7	D304	B - 10
Q302	B - 7	D305	C - 9
Q303	D - 10	D306	D - 10
Q304	D - 10	D307	D - 10
Q305	A - 8	D308	D - 10
Q306	D - 10	D311	C - 9
Q308	C - 9	D312	C - 8
Q309	C - 9	D313	C - 7
Q311	C - 8	D381	C - 8
Q312	C - 8	D401	B - 1
Q313	B - 8	D403	B - 1
Q314	C - 7	D405	A - 1
Q315	D - 7	D406	B - 2
Q401	C - 2	D407	B - 2
Q402	C - 2	D571	B - 9
Q403	C - 2	D681	E - 8
		D683	D - 9

- A BOARD -

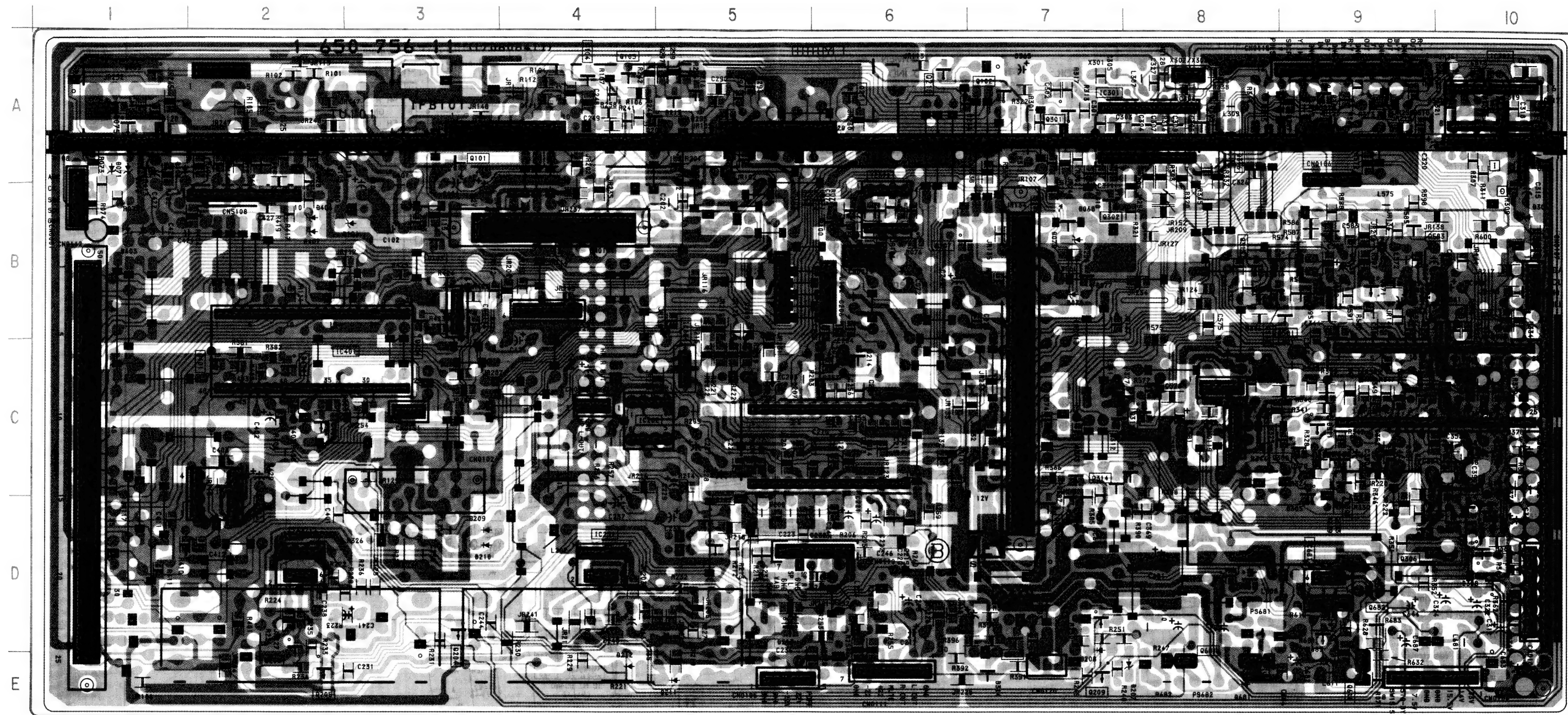


- A BOARD -

104	B-3
181	B-9
182	B-9
110	E-9
181	E-7
182	D-9

DIODE

168	B-7
169	A-1
171	A-1
173	A-1
175	A-1
177	B-7
178	B-7
179	B-7
101	B-2
106	D-7
107	E-7
108	D-7
109	D-3
110	D-3
111	E-5
112	E-4
113	D-5
114	C-6
101	B-9
102	A-9
104	B-10
105	C-9
106	D-10
107	D-10
108	D-10
111	C-9
112	C-8
113	C-7
181	C-8
101	B-1
103	B-1
105	A-1
106	B-2
107	B-2
171	B-9
181	E-8
183	D-9

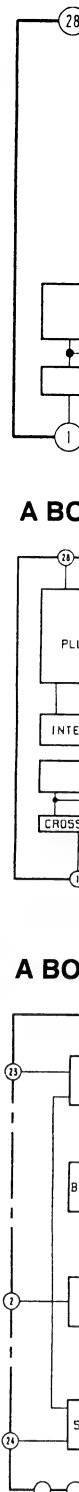


Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.



A BO



A BC

A BO

23

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466
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11

AXIS


MAT	
&	



A BO



RMS A BOARD

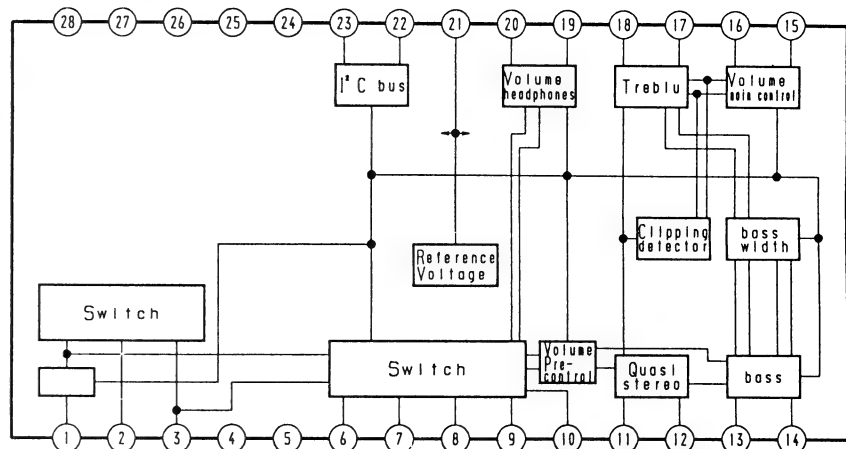
L p-p (H)	① SECAM 1.2 Vp-p (H)	① NTSC 1.4 Vp-p (H)	② PAL 1.9 Vp-p (H)	② SECAM 1.3 Vp-p (H)
SC p-p (H)	③ PAL 2.3 Vp-p (H)	③ SECAM 2.2 Vp-p (H)	③ NTSC 2.7 Vp-p (H)	④ PAL 2.3 Vp-p (H)
CAM p-p (H)	④ NTSC 2.8 Vp-p (H)	⑤ PAL 0.6 Vp-p (H)	⑤ SECAM 1.2 Vp-p (H)	⑤ NTSC 0.5 Vp-p (H)
L p-p (H)	⑥ SECAM 1.5 Vp-p (H)	⑥ NTSC 0.7 Vp-p (H)	⑦ PAL, SECAM 0.5 Vp-p (H)	⑦ NTSC 0.6 Vp-p (H)
L p-p (H)	⑧ SECAM 0.4 Vp-p (H)	⑧ NTSC 0.6 Vp-p (H)	⑨ PAL, SECAM 1.5 Vp-p (H)	⑨ NTSC 1.5 Vp-p (H)
AL, SECAM p-p (H)	⑩ NTSC 1.0 Vp-p (H)	⑪ 5.2 Vp-p (H)	⑫ 6.7 Vp-p (H)	⑬ 0.12 Vp-p(540KHZ)
p-p (H)	⑮ 3.8 Vp-p (H)	⑯ 5.0 Vp-p (H)	⑰ 8.9 Vp-p (H)	⑱ 3.3 Vp-p (H)
p-p (H)	⑳ 4.1 Vp-p (H)			

indicated with the mark ※
Schematic diagram are shown
e below.

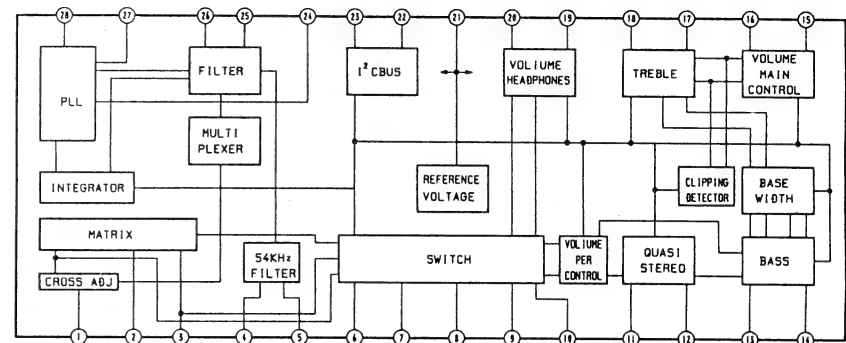
PAL	SECAM	NTSC3.58	NTSC4.43
0.0	0.0	4.8	4.9
0.0	5.0	5.0	0.0
4.7	4.2	3.6	4.1
4.8	4.4	4.6	4.8
0.0	0.0	0.0	1.6
5.5	5.5	5.5	0.1
0.0	5.5	5.5	0.0
0.0	0.0	0.0	1.6

A2941B	A2941D	A2943E	A2941K	A2942U
1MF	1MF	1MF	1MF	0.01MF
1MF	2.2MF	2.2MF	2.2MF	2.2MF
470PF	-	-	-	-
DAN204K	-	-	-	-
DAN204K	-	-	-	-
TDA6612	TDA6612	TDA6612	TDA6612	TDA6622
IFH-389F	IFH-389	IFH-389	IFH-389	IFH-395
12K	-	-	-	-
330	-	-	-	-
120	-	-	-	-
0	-	-	-	-
UV916H	UV916H	UV916H	UV916H	U944C

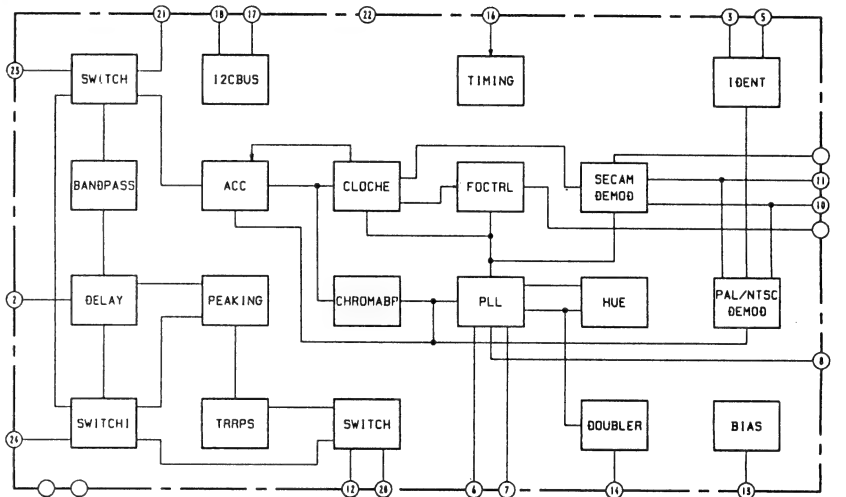
A BOARD IC201 TDA6622 (UK Model only)



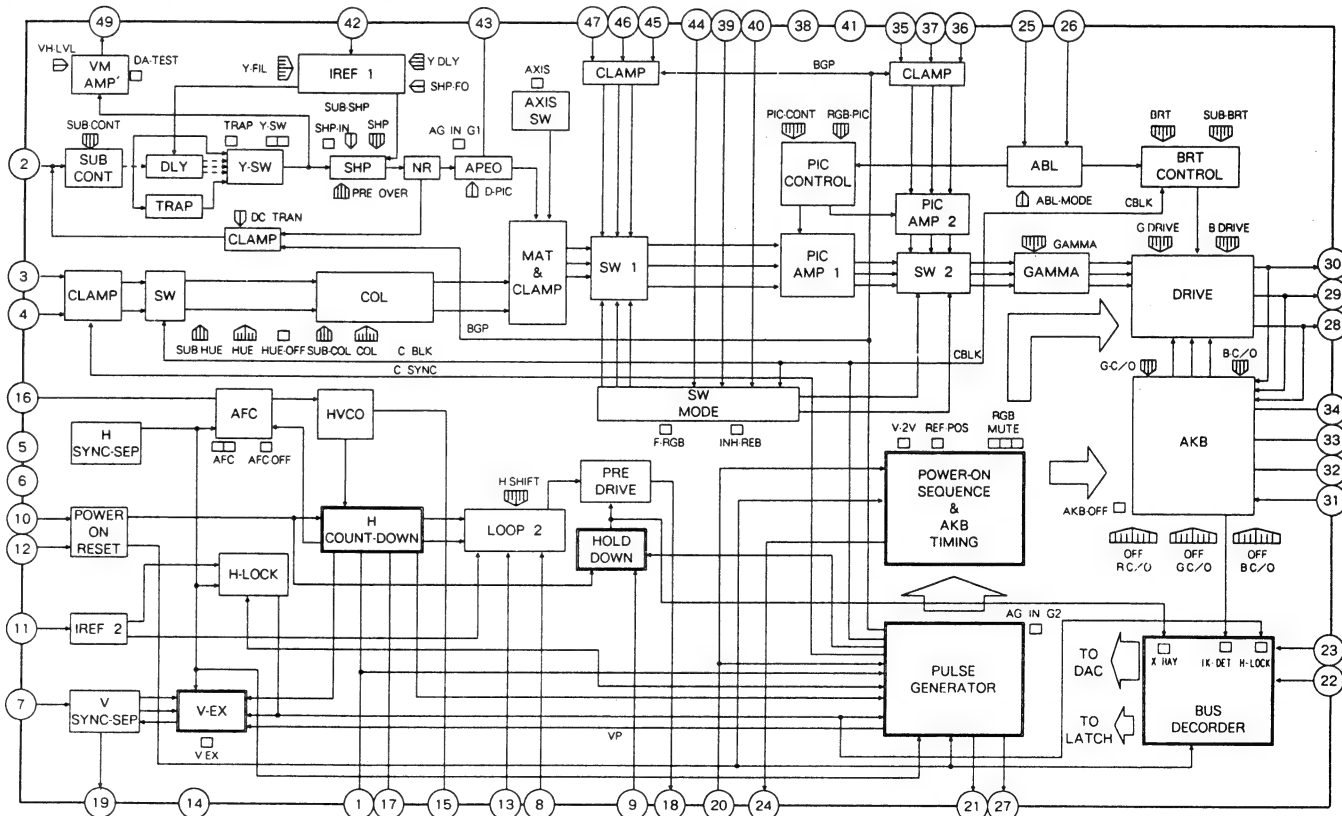
A BOARD IC201 TDA6612



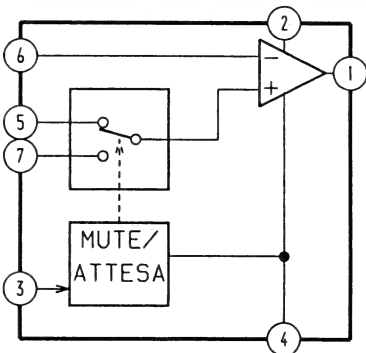
A BOARD IC301 TDA9145/N2B



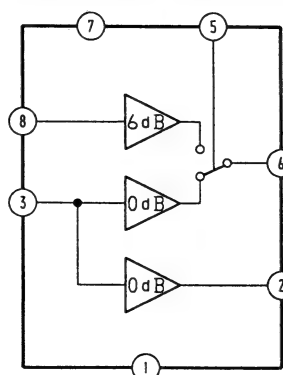
A BOARD IC304 CXA1587S



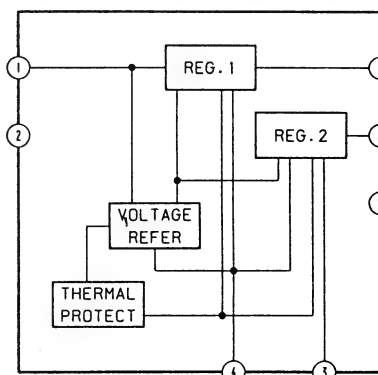
A BOARD IC251/261 TDA2052



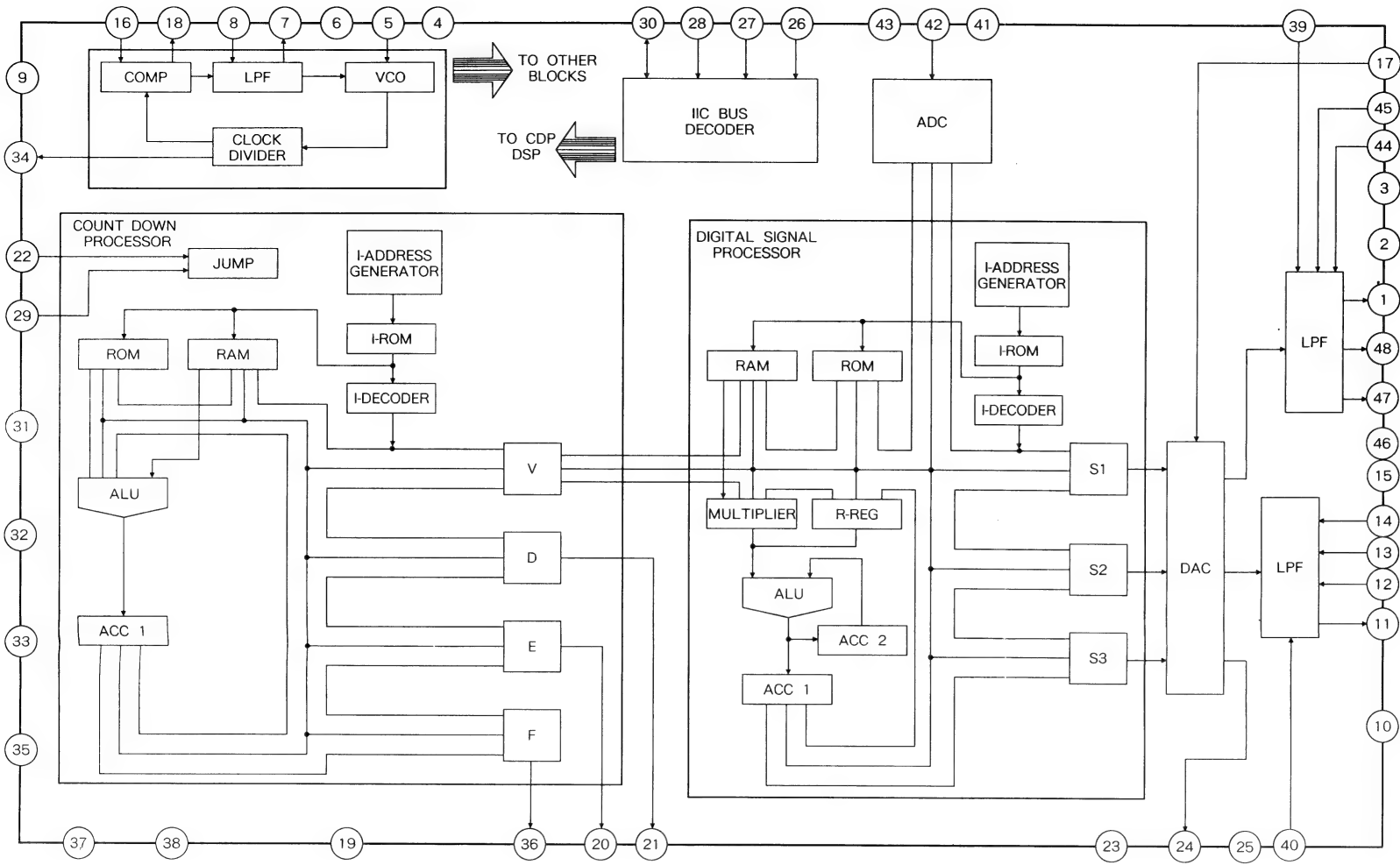
A BOARD IC402 TEA2114



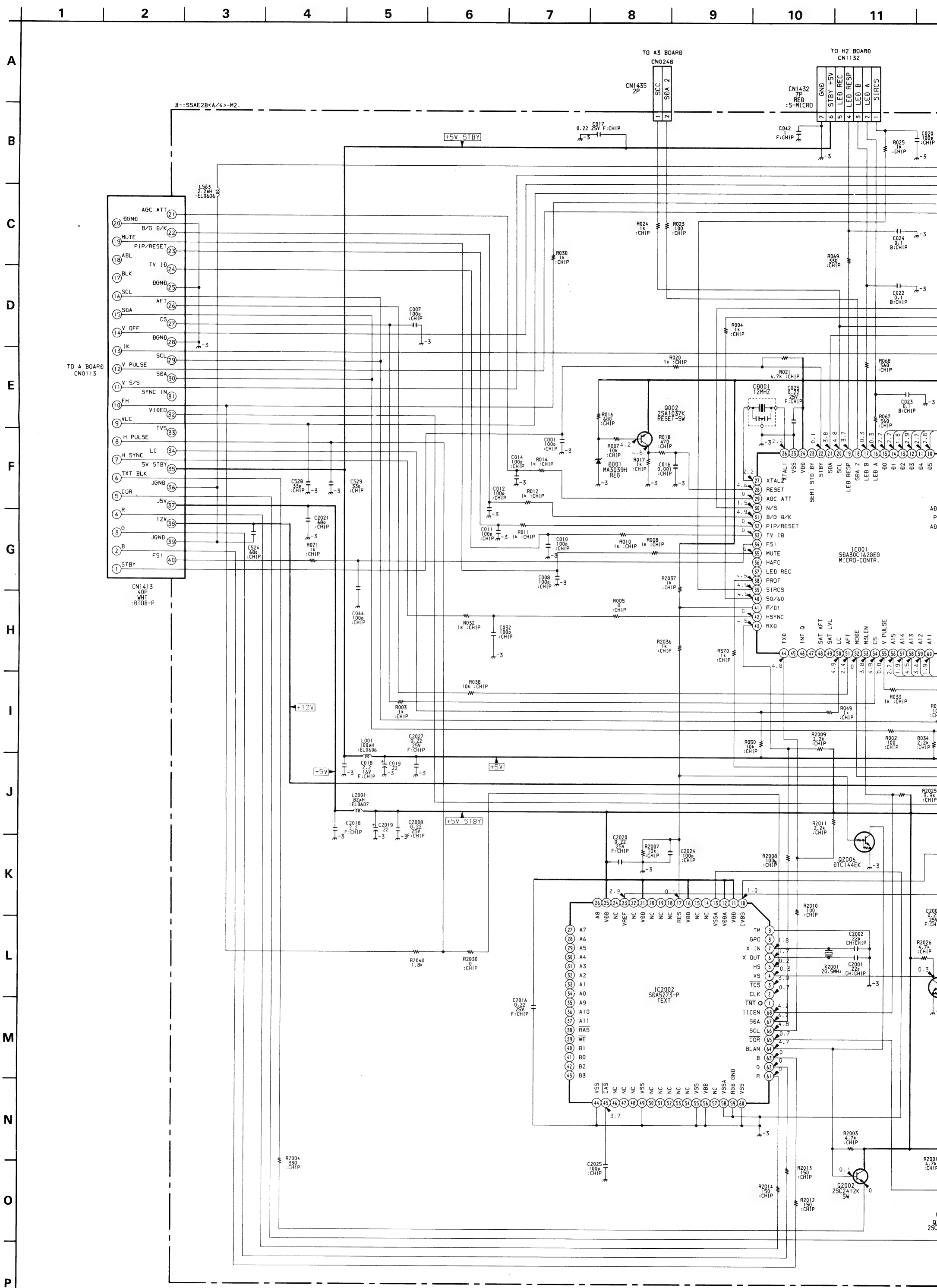
A BOARD IC681 TDA8138A

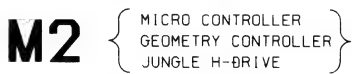


M2 BOARD IC561 CXD2018Q



TO A BOARD
CN0113





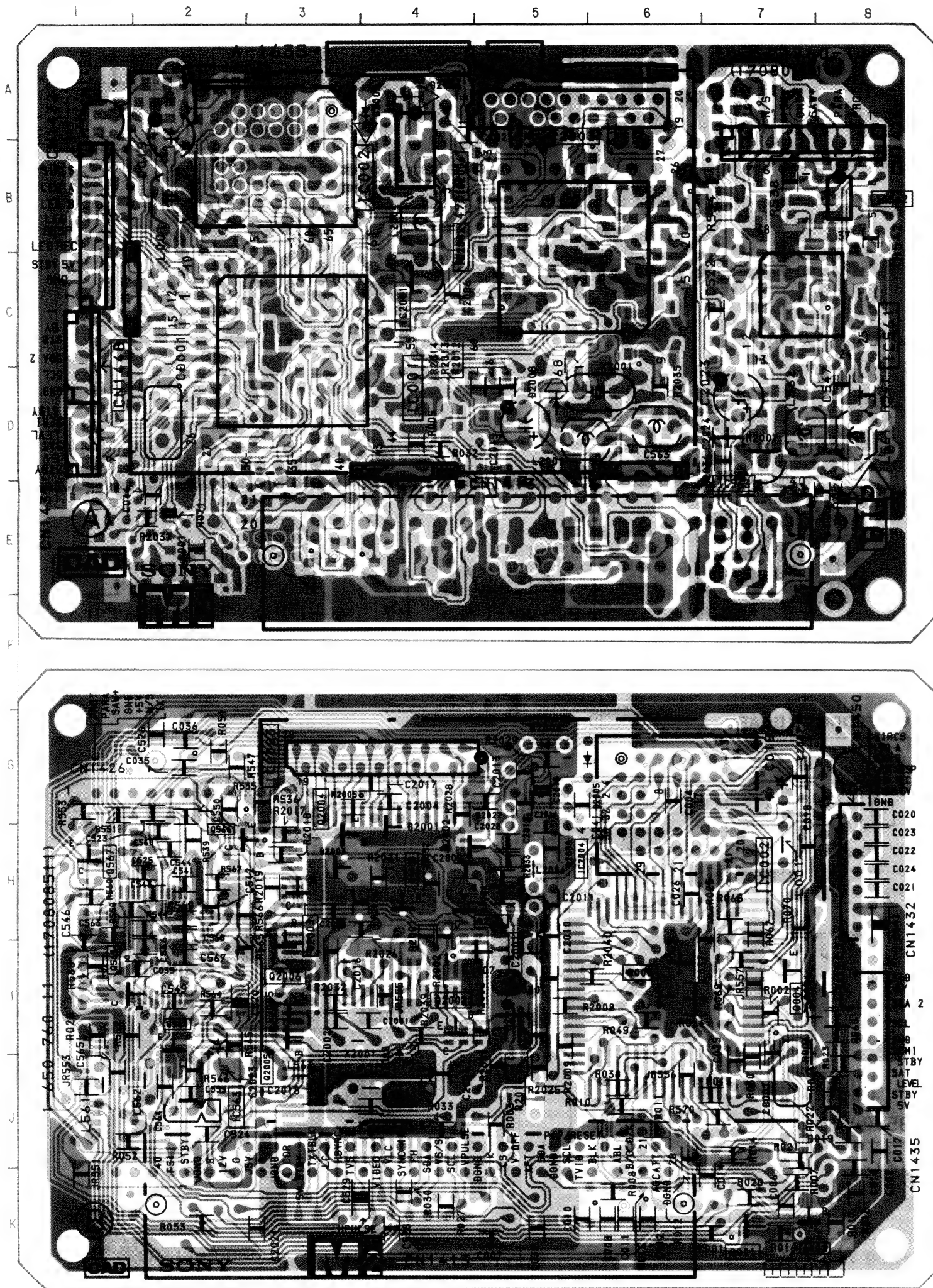
M2

MICRO CONTROLLER,
GEOMETRY CONTROLLER,
JUNGLE, H - DRIVE

D

H/V OUT, PIN OUT,
POWER SUPPLY

- M2 BOARD -



IC	
IC001	C - 4
IC002	B - 3, H - 7
IC561	C - 8
IC562	B - 8
IC563	D - 7, J - 3
IC2001	C - 4, I - 5
IC2002	C - 5
IC2003	B - 5, G - 3
IC2004	B - 4, H - 5

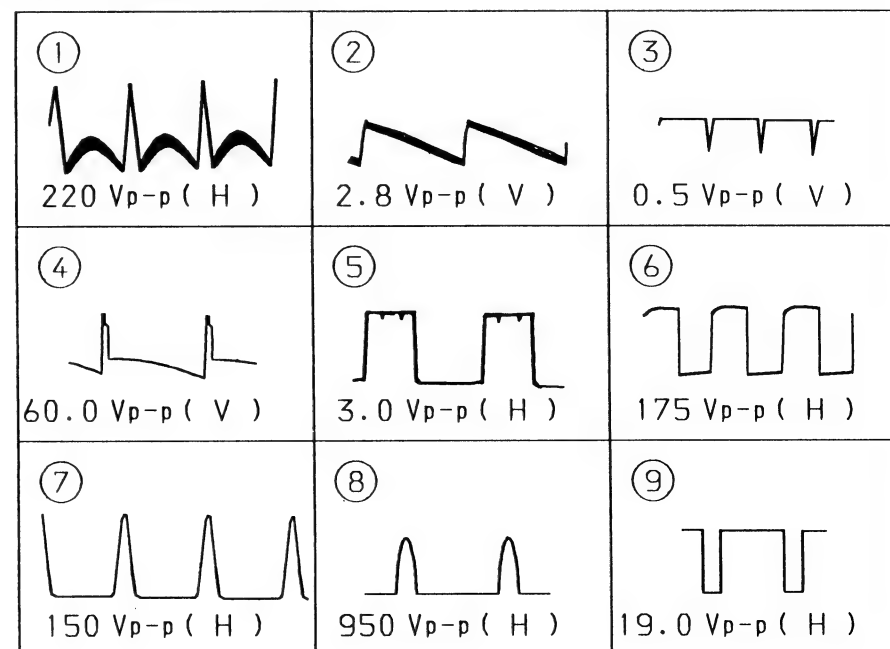
TRANSISTOR	
Q002	K - 7
Q003	I - 6
Q564	I - 2
Q565	I - 1
Q566	G - 2
Q567	H - 1
Q2001	H - 5
Q2002	I - 4
Q2003	H - 3
Q2005	J - 3
Q2006	I - 3
Q2008	H - 4

DIODE	
D001	K - 7
D2001	G - 4
D2002	H - 4
D2003	H - 3

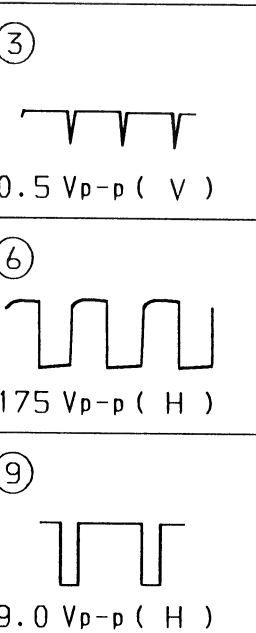
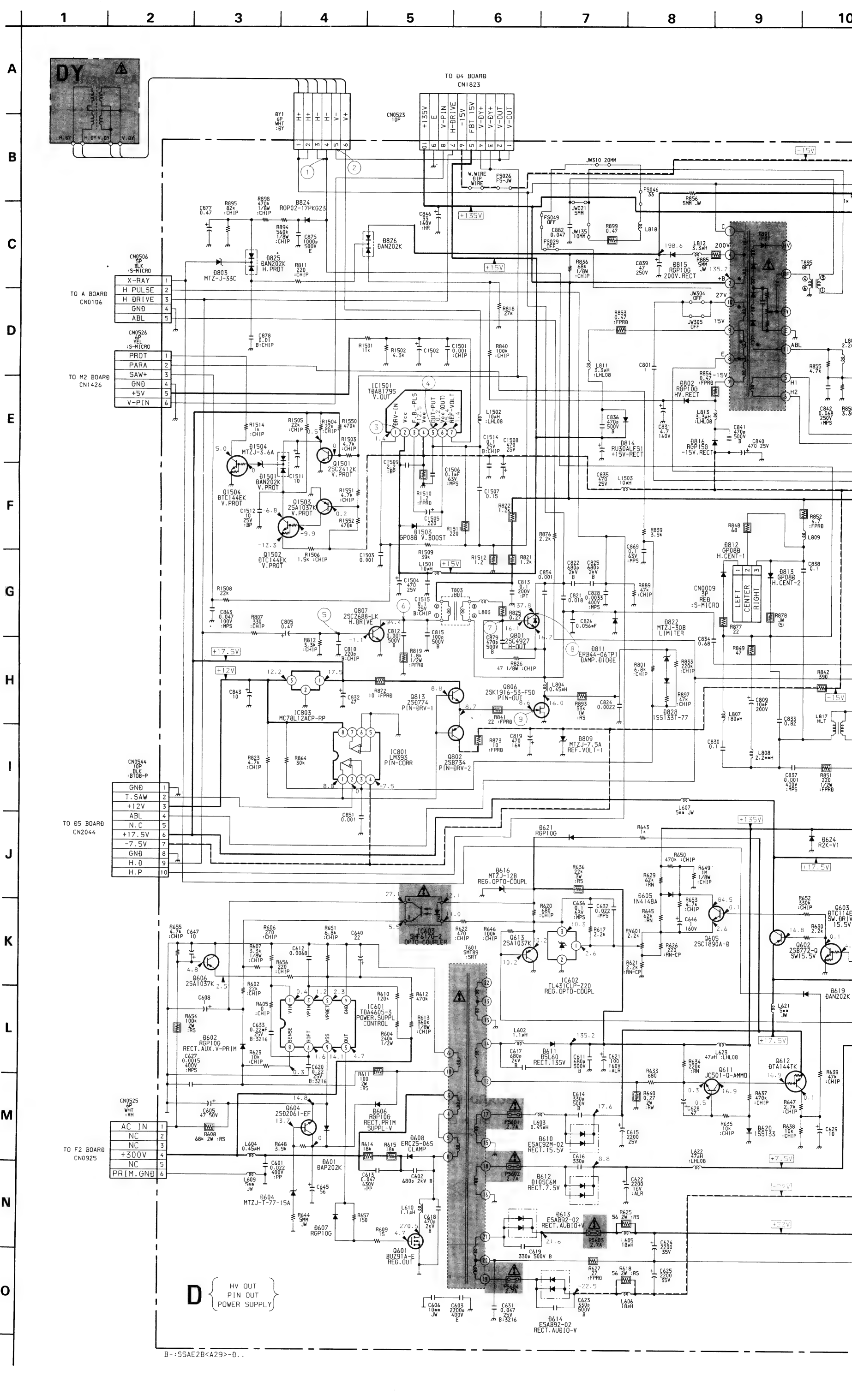
Note :

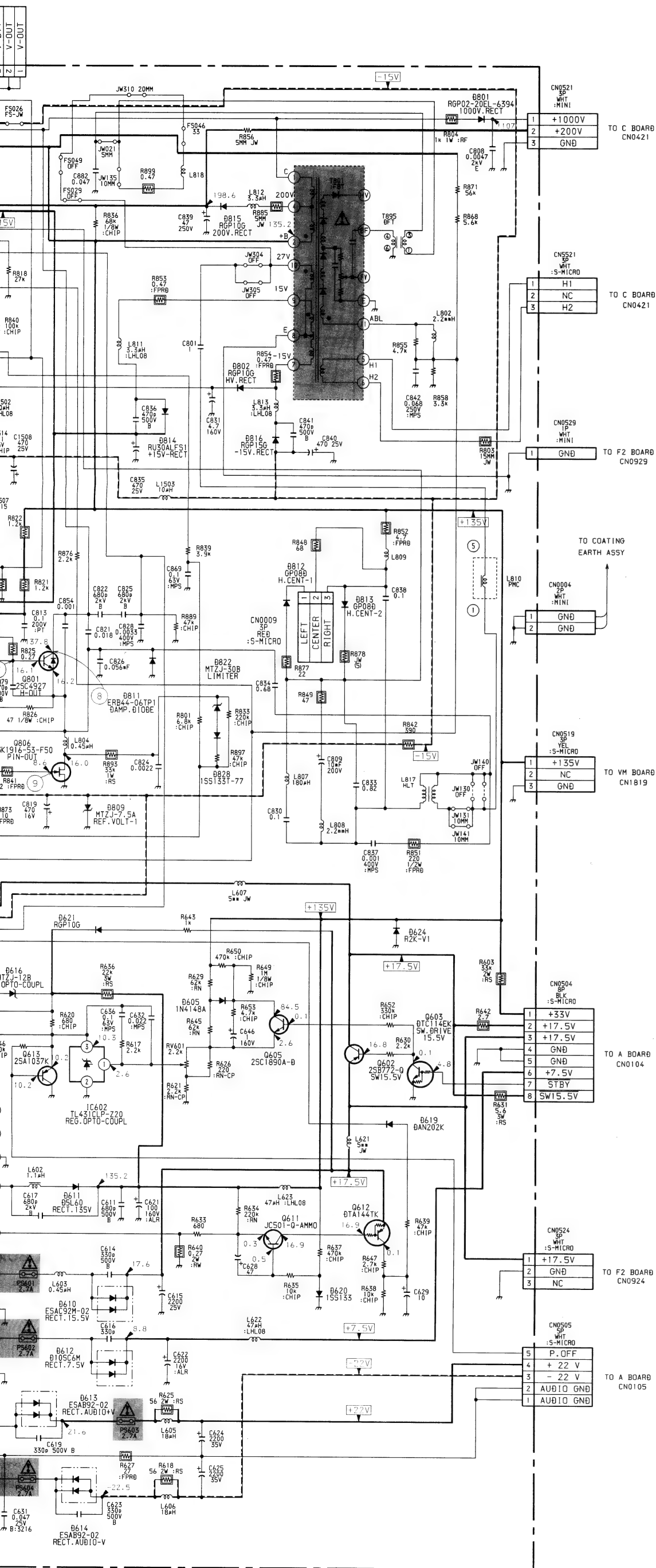
- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

WAVEFORMS D BOARD

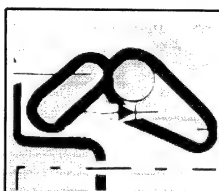
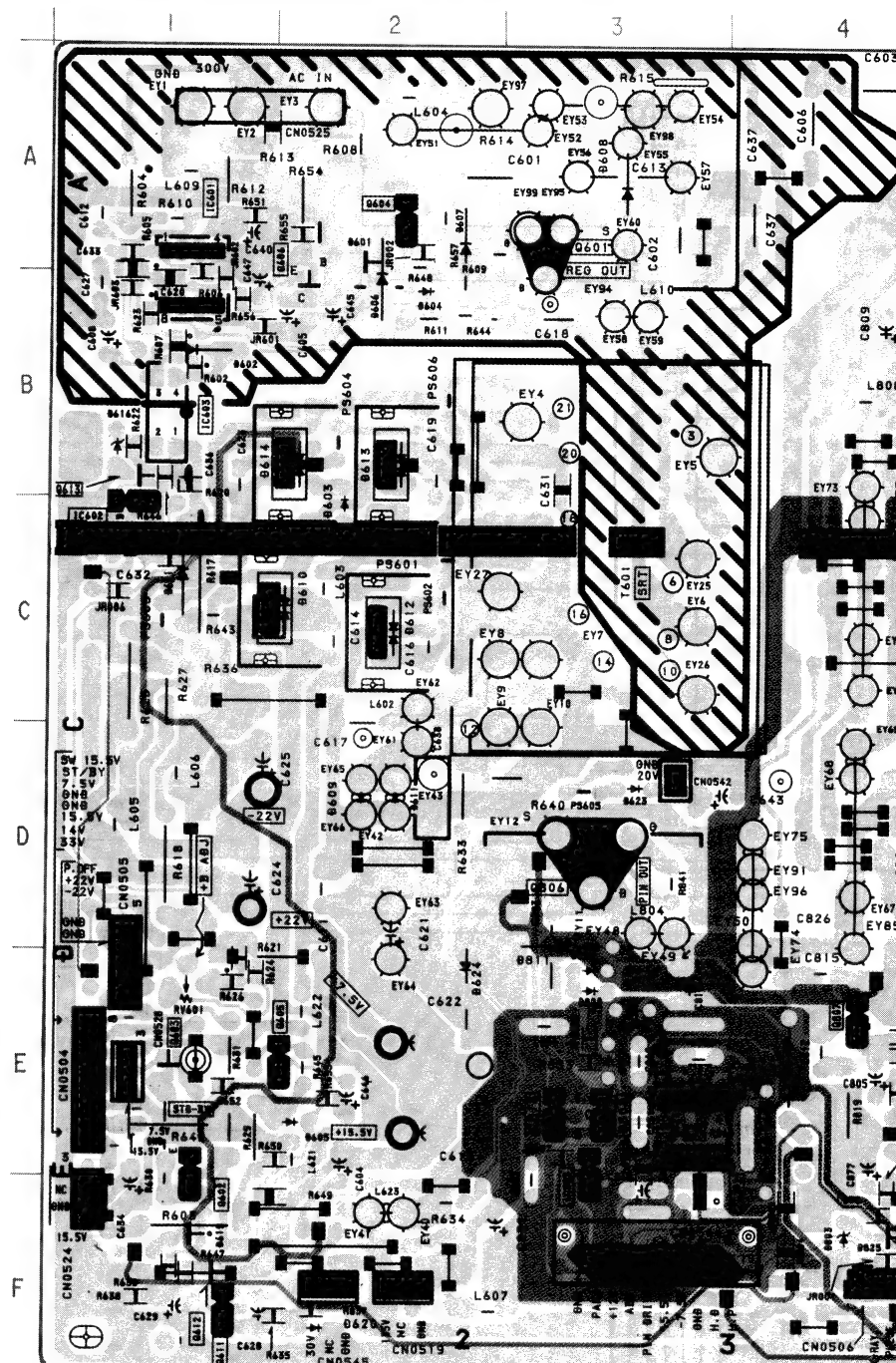


DIODE	
0001	K - 7
02001	G - 4
02002	H - 4
02003	H - 3



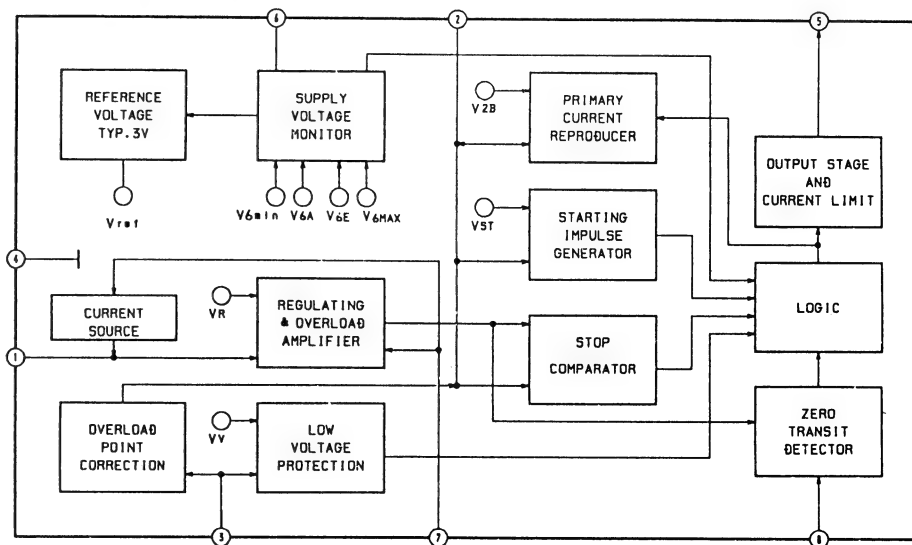


- D BOARD -



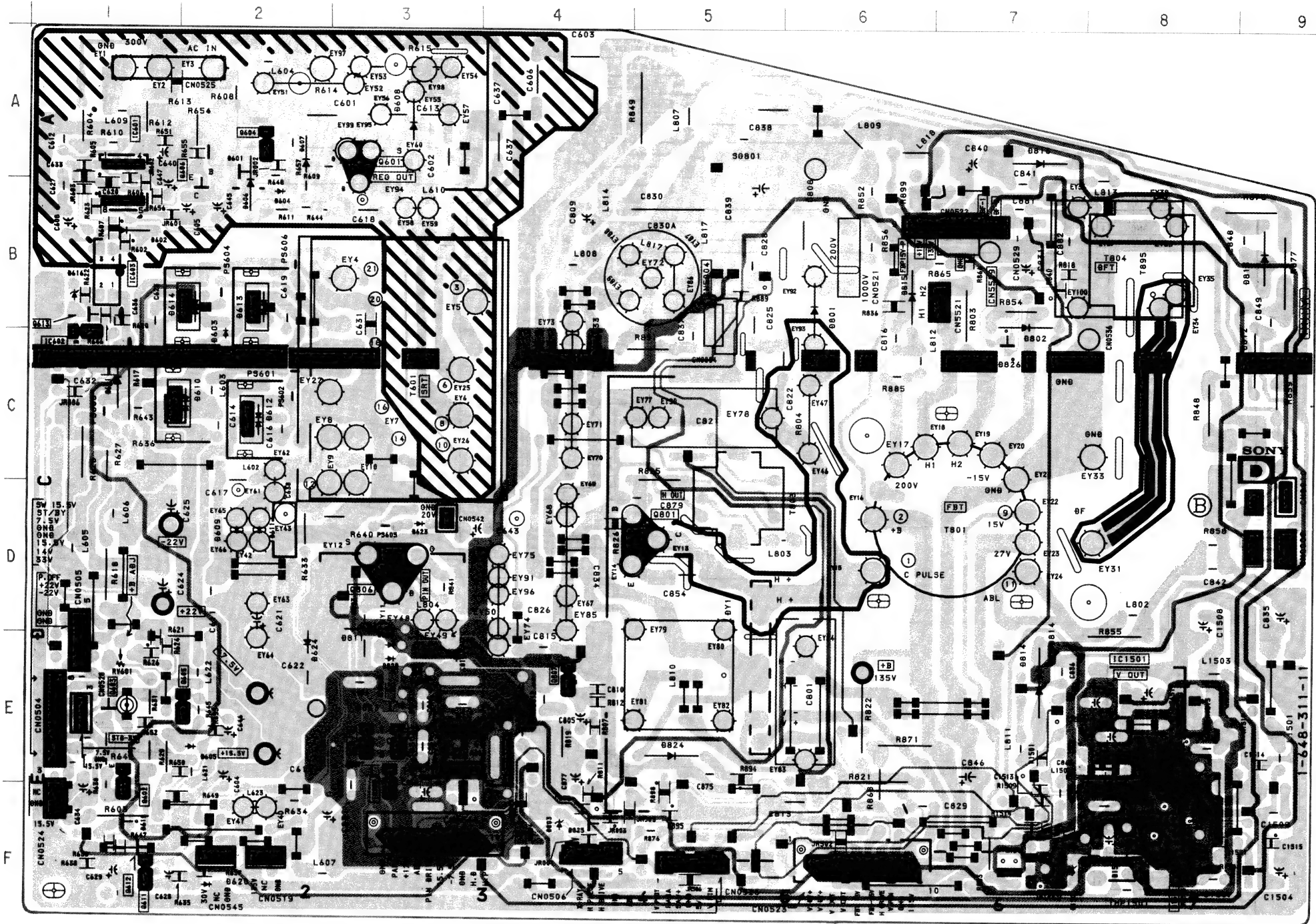
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock during inspection or repairing.

D BOARD IC601 TDA4605-3



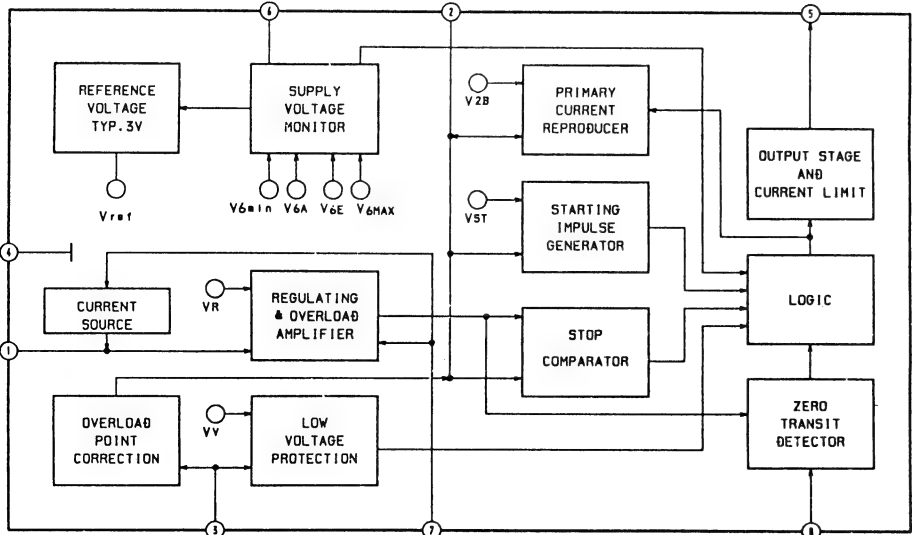
- D BOARD -

Note :
• : Pattern from the side which enables seeing.
• : Pattern of the rear side.



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

D BOARD IC601 TDA4605-3

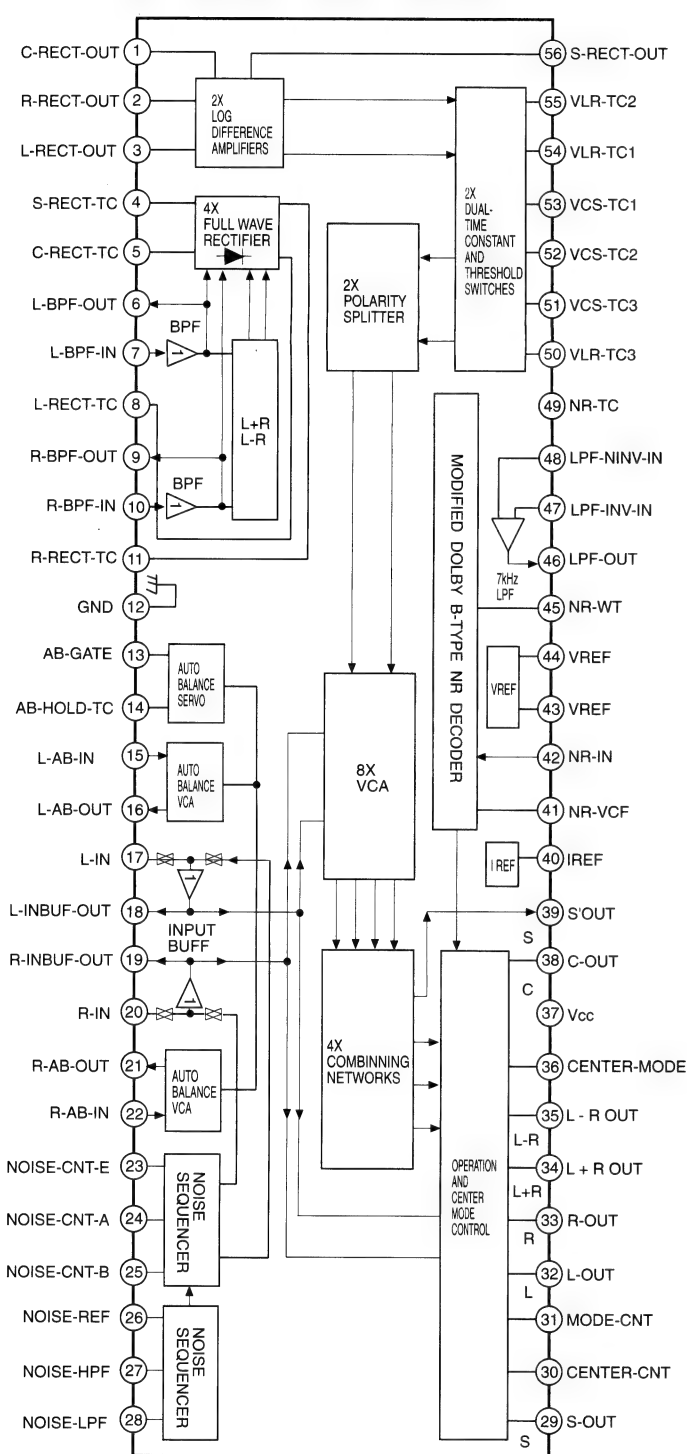


IC		D607	A - 2
IC601	A - 1	D608	A - 3
	C - 1	D610	C - 2
	B - 1	D611	D - 2
	E - 3	D612	C - 2
	F - 3	D613	B - 2
	E - 8	D614	B - 2
TRANSISTOR		D616	B - 1
Q601	A - 3	D619	F - 1
	F - 1	D620	F - 2
	E - 1	D621	C - 1
	A - 2	D624	E - 2
	E - 2	D801	B - 6
	B - 2	D802	B - 7
	F - 1	D803	F - 4
	F - 1	D809	E - 3
	B - 1	D811	D - 3
	D - 5	D812	C - 9
	E - 3	D813	B - 9
	D - 3	D814	E - 7
	E - 4	D815	B - 6
	E - 3	D816	A - 7
	F - 8	D822	E - 3
DIODE		D824	E - 5
D601	A - 2	D825	F - 4
D602	B - 1	D826	C - 7
D604	B - 2	D828	E - 3
D605	E - 2	D1501	F - 8
D606	B - 2	D1503	F - 8
VARIABLE RESISTOR		D1504	F - 7
		RV601	E - 1

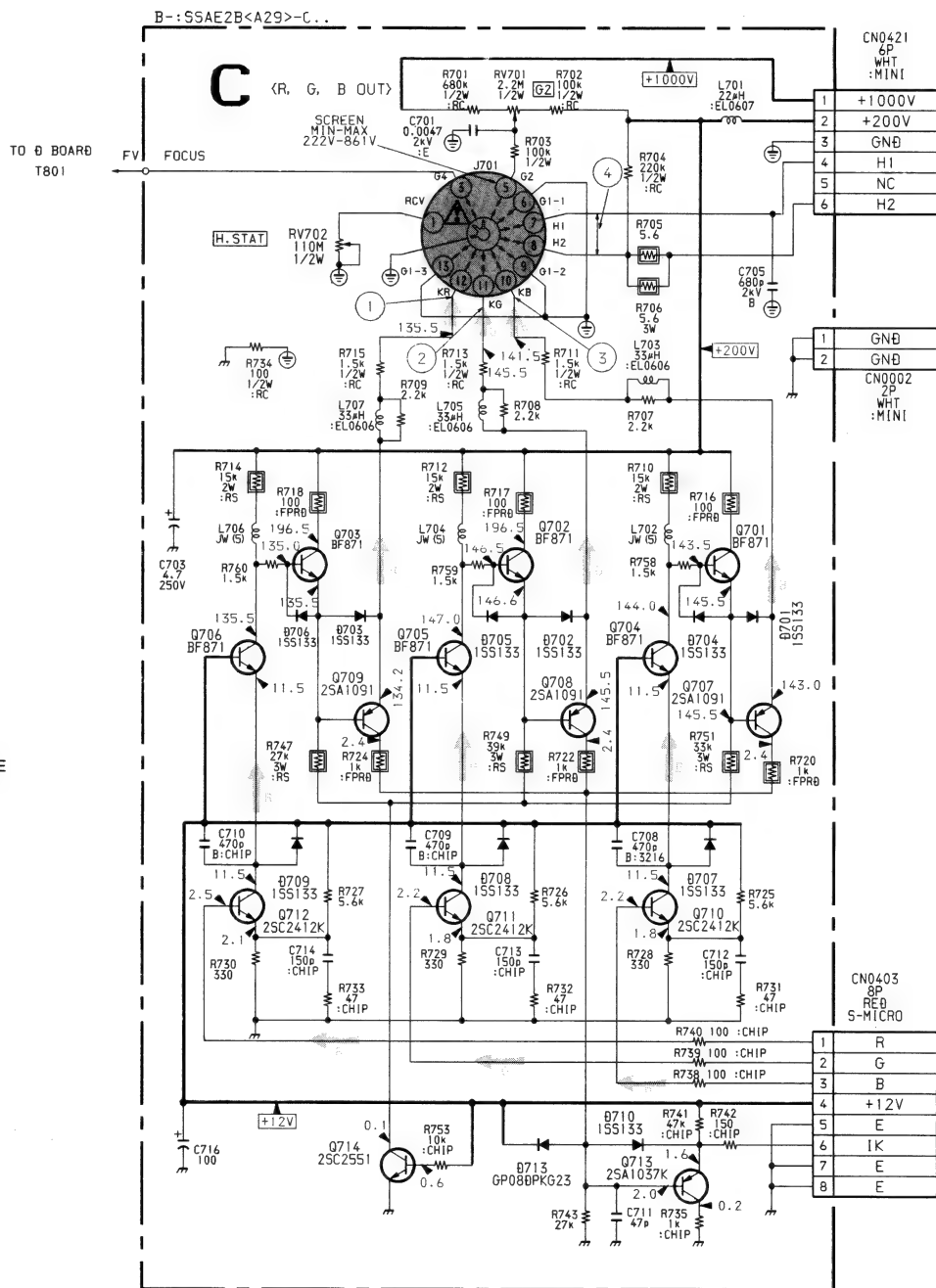
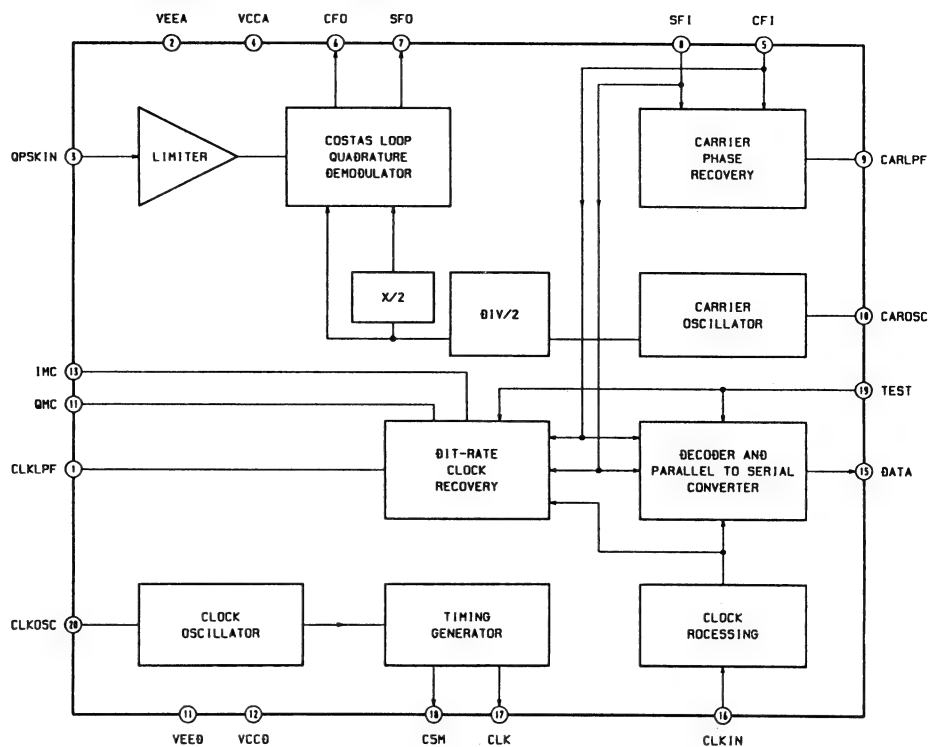
A3 BOARD * MARK

Model	KV-A2943E	KV-A2942U
BP1101	5.850MHz	6.552MHz
C1159	-	47P
CF1101	-	6.0MHz
CF1102	5.5MHz	-
JR1101	0 : CHIP	-
L1105	-	15MMh
X1102	11.700MHz	13.104MHz

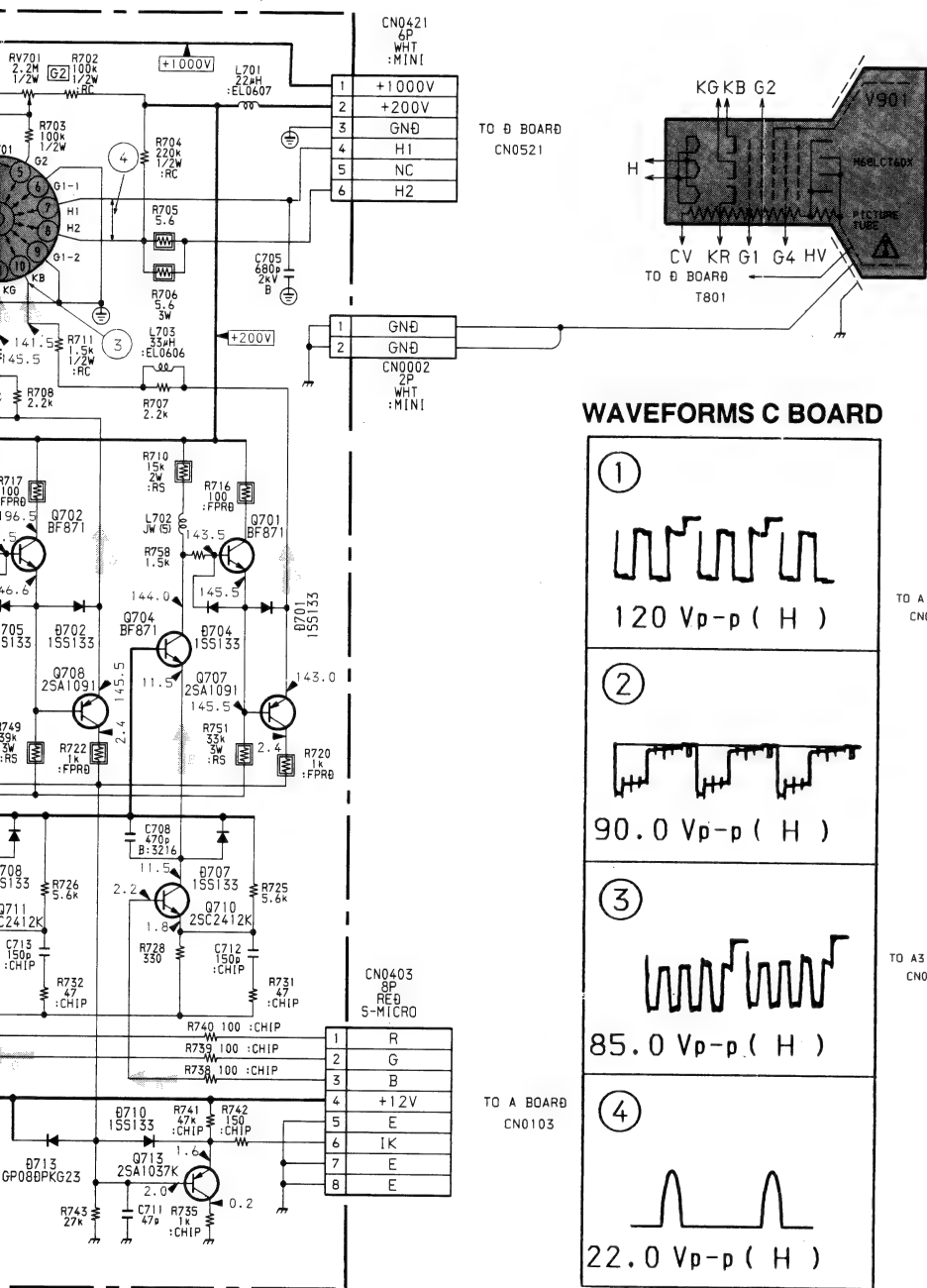
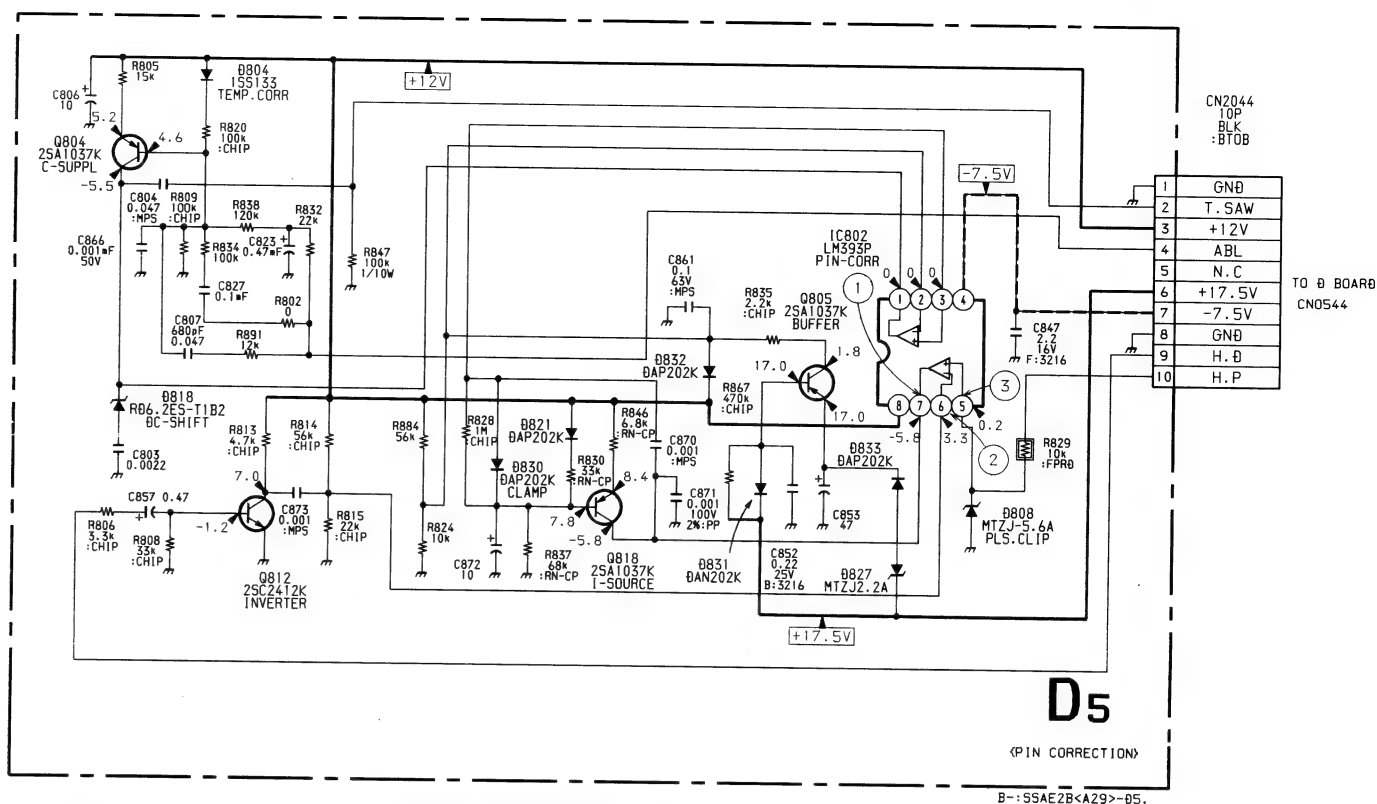
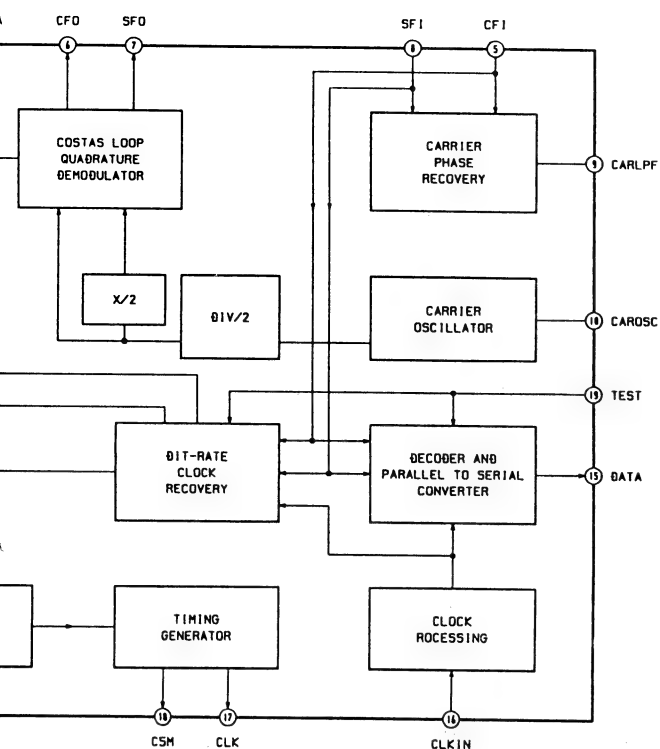
A3 BOARD IC3201 M69032P



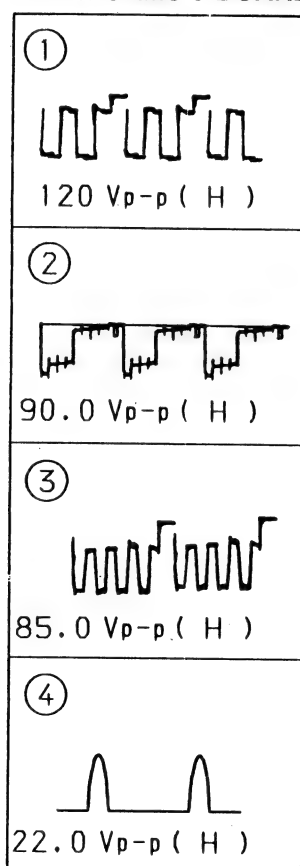
A3 BOARD IC1101 TDA8732



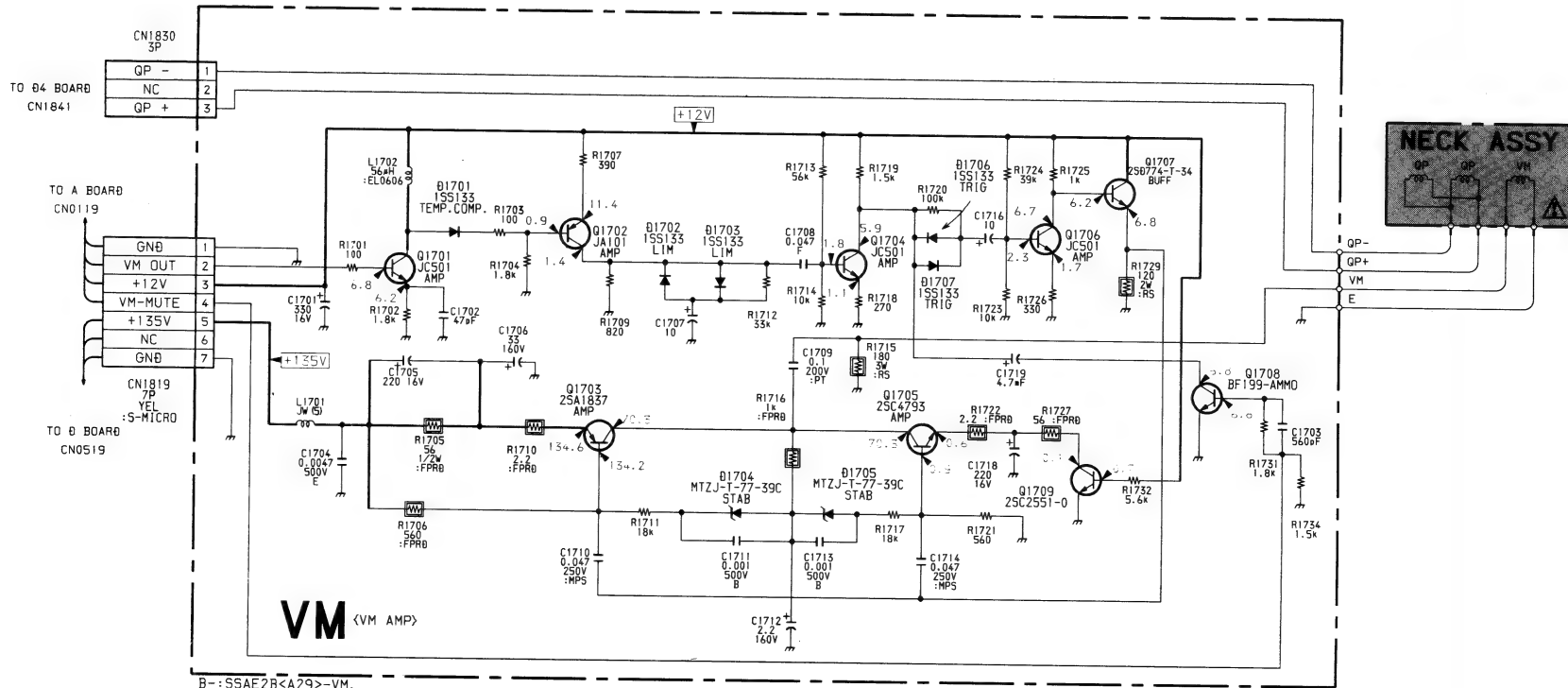
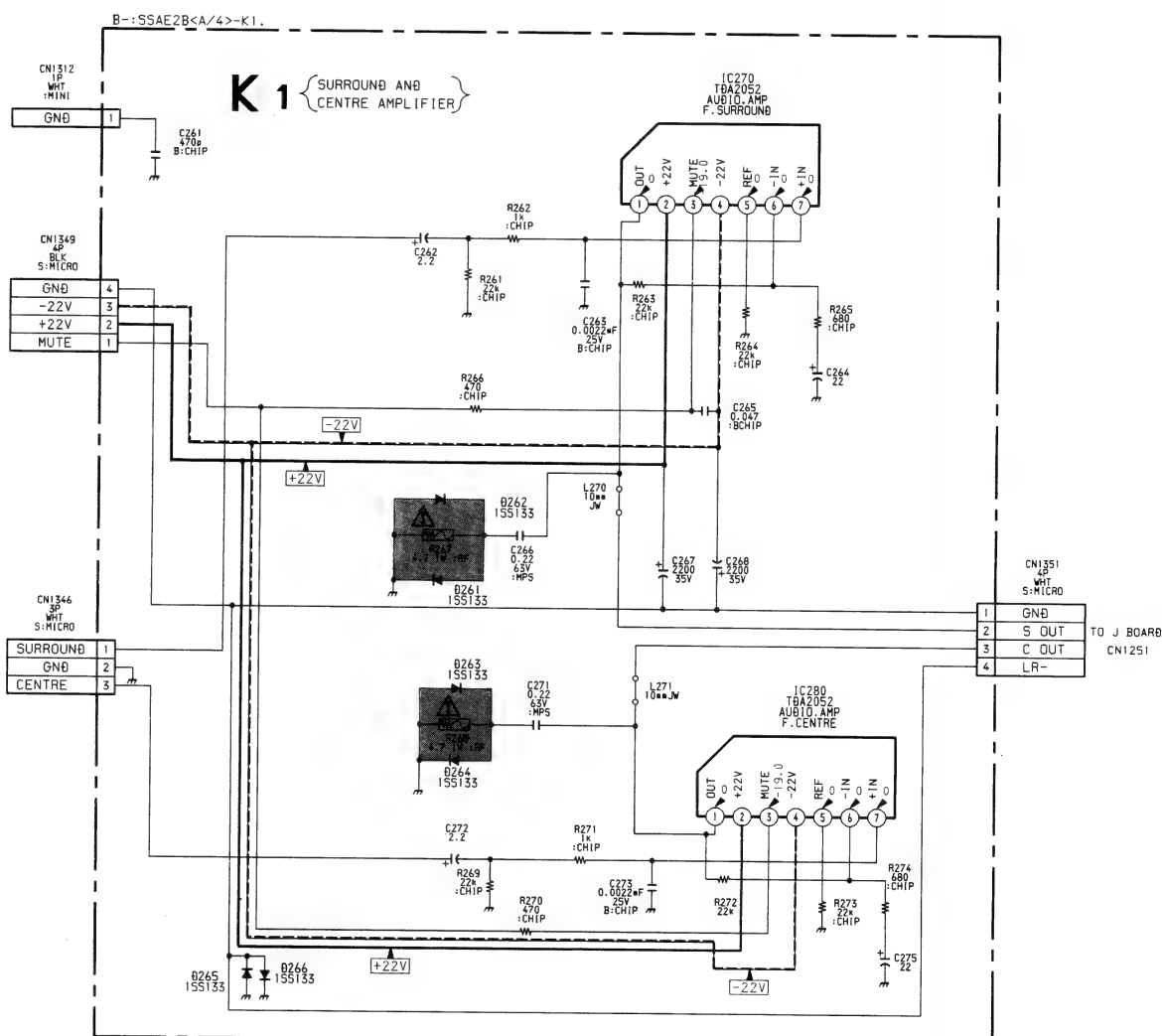
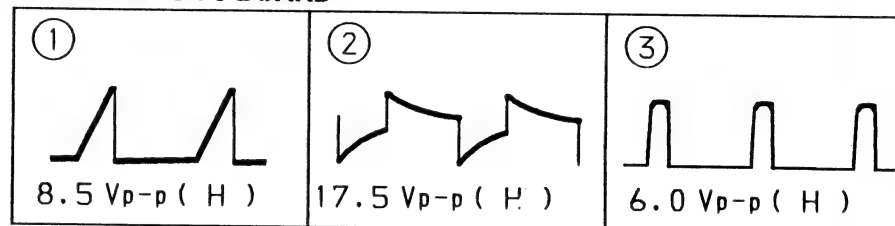
101 TDA8732



WAVEFORMS C BOARD



WAVEFORMS D5 BOARD



A3

NICAM DECODER
NICAM DEMODULATOR
GRAPHIC EQUALIZER, DOLBY

K1

SURROUND AND
CENTRE AMPLIFIER

D5

[PIN CORRECTION]

C

[R.G.B. OUT]

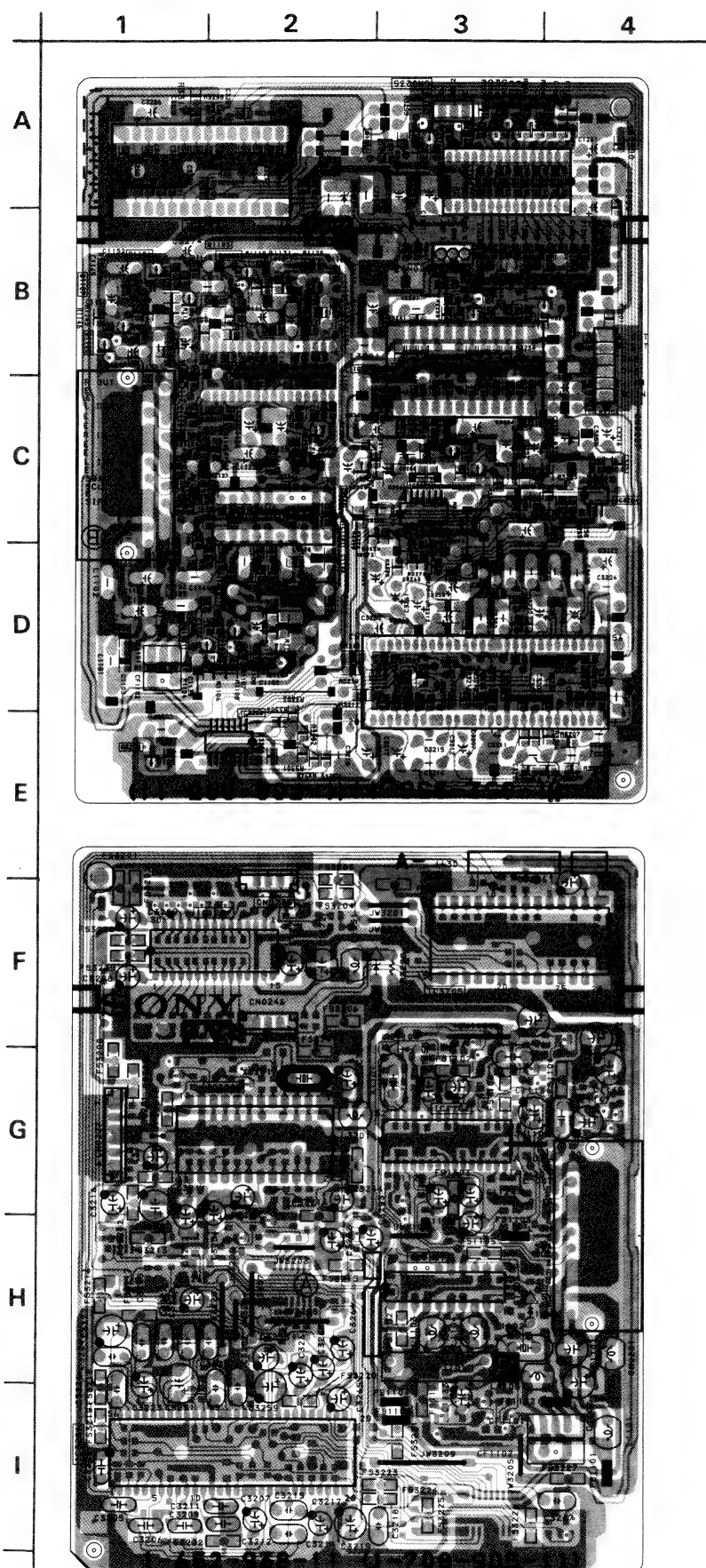
VM

[VM AMP]

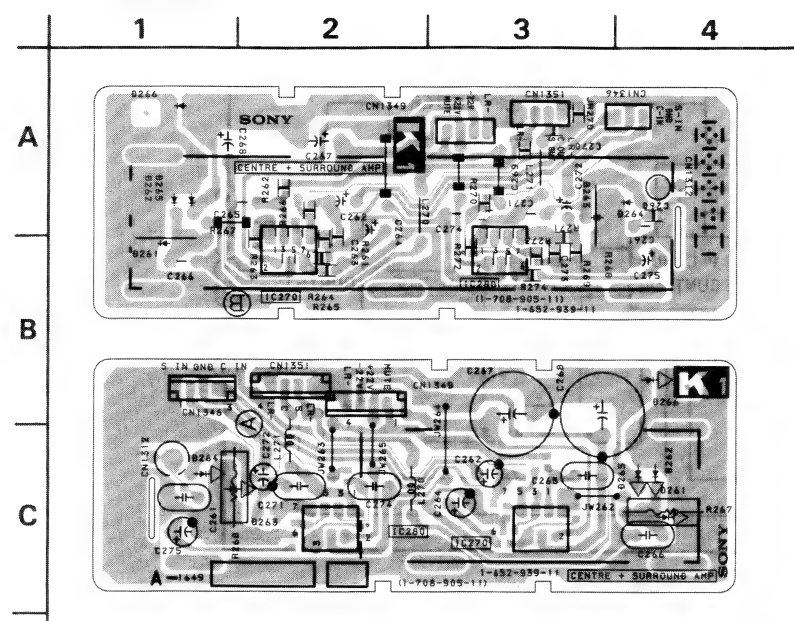
D4

[V - PIN Q P]

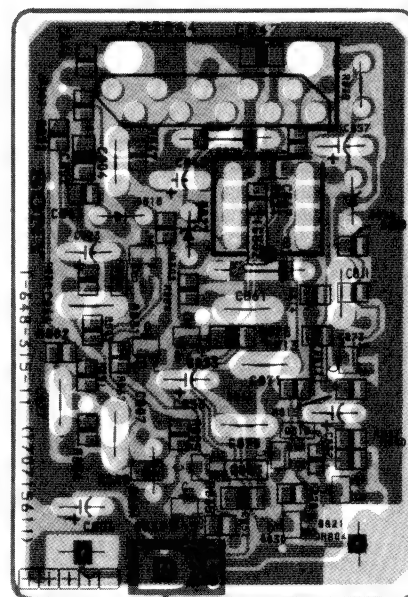
— A3 BOARD —



— K1 BOARD —



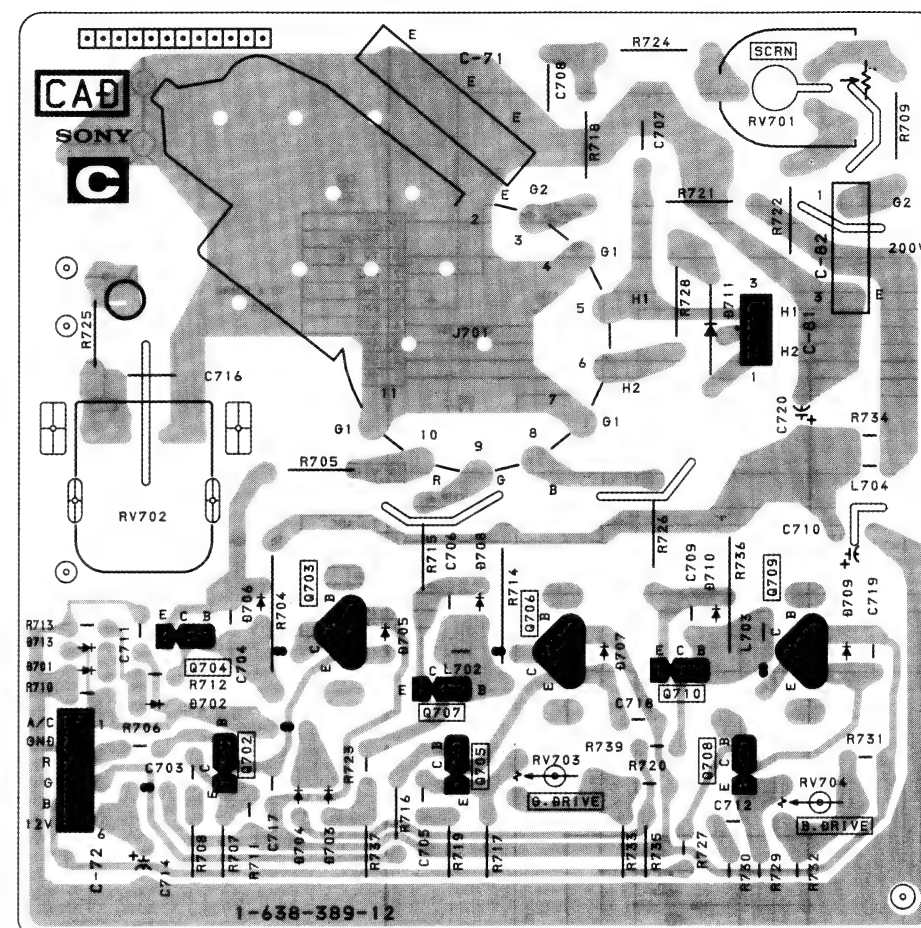
— D5 BOARD —



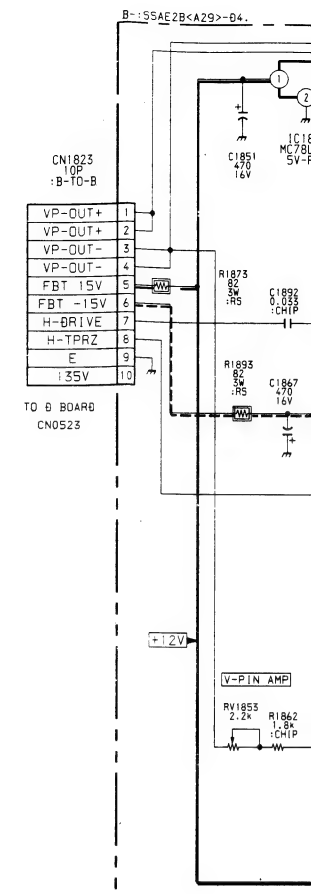
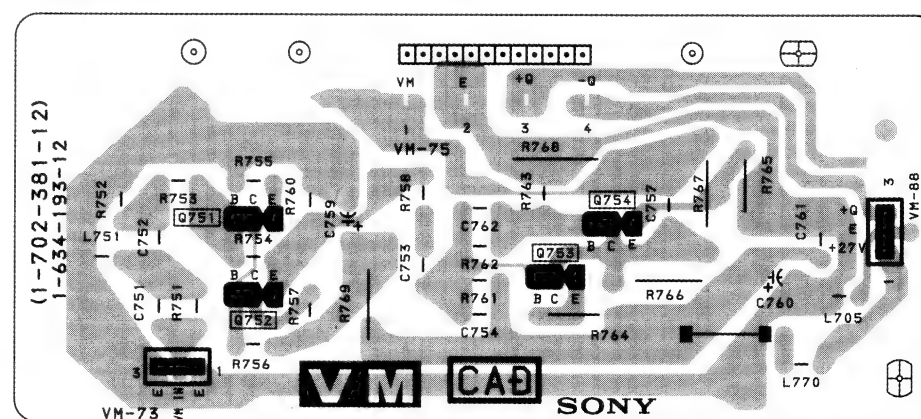
Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

— C BOARD —



— VM BOARD —



CORRECTION □

C

[R.G.B. OUT]

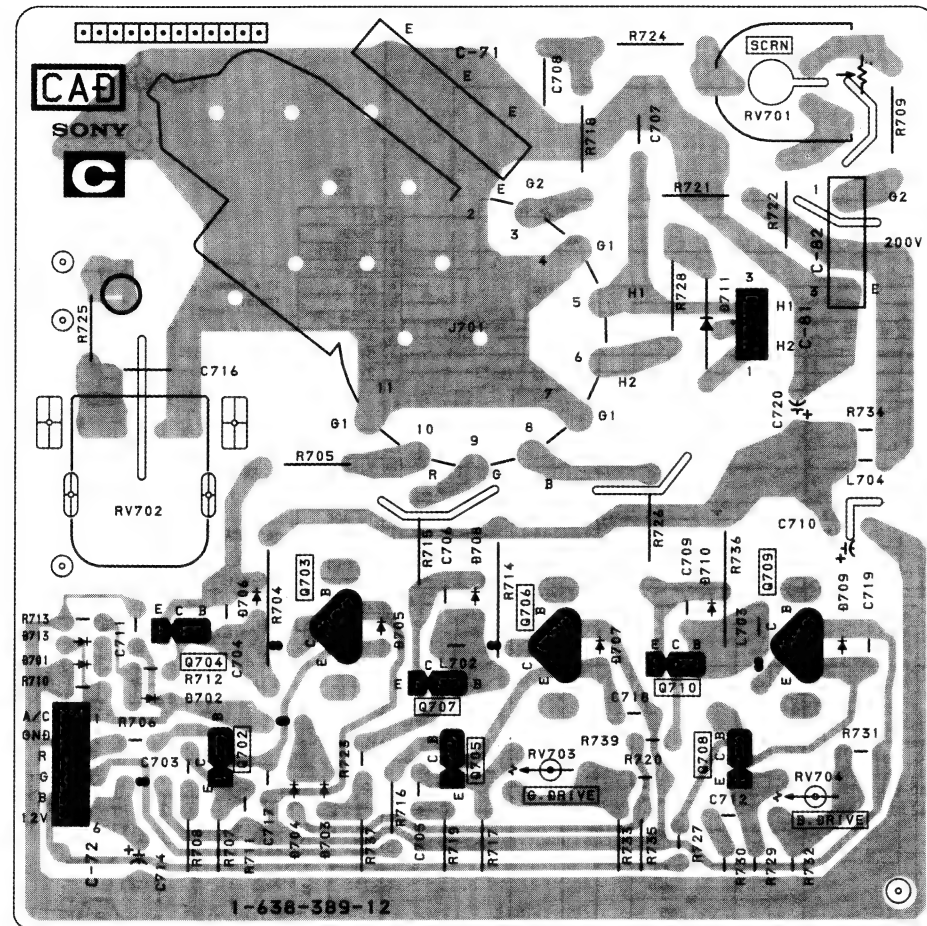
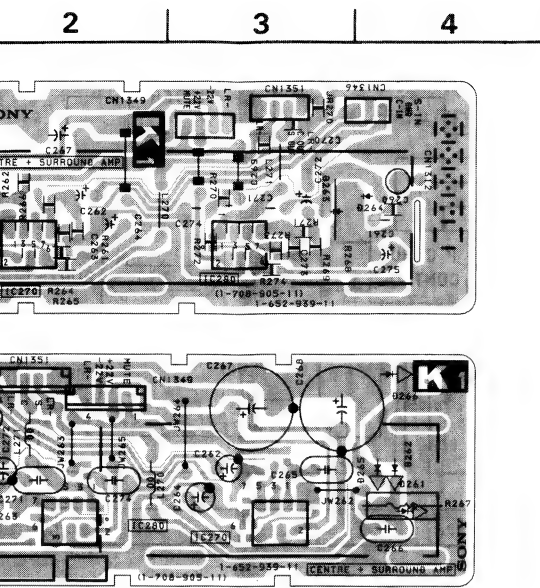
VM

[VM AMP]

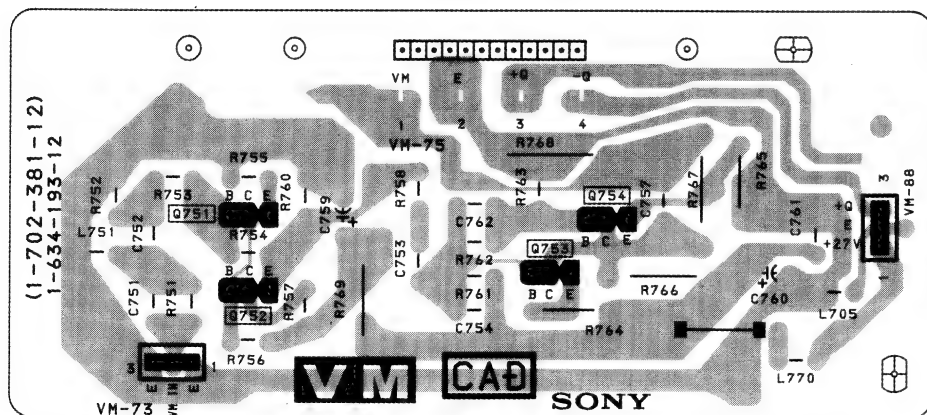
D4


[V - PIN Q P]

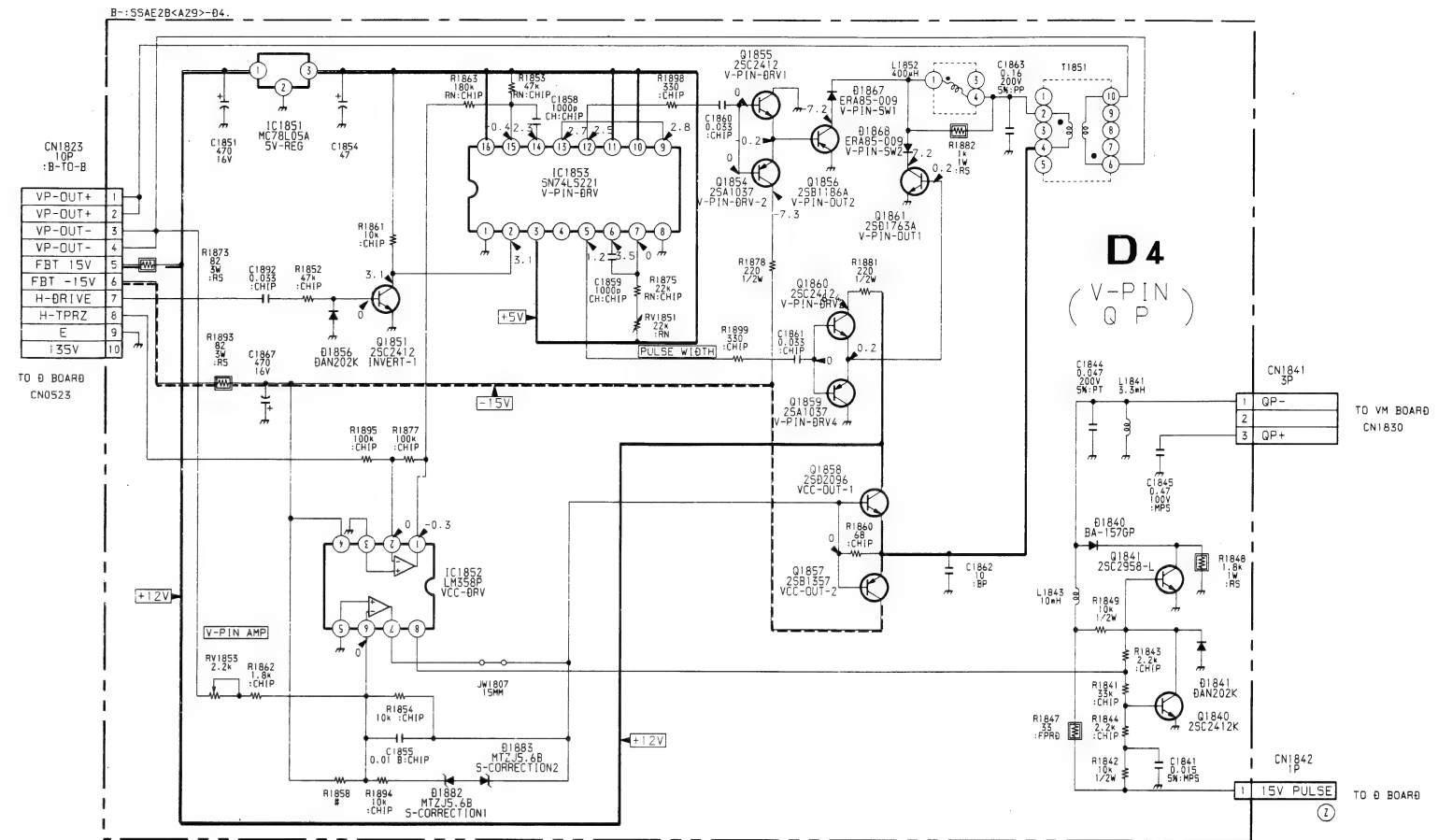
- C BOARD -



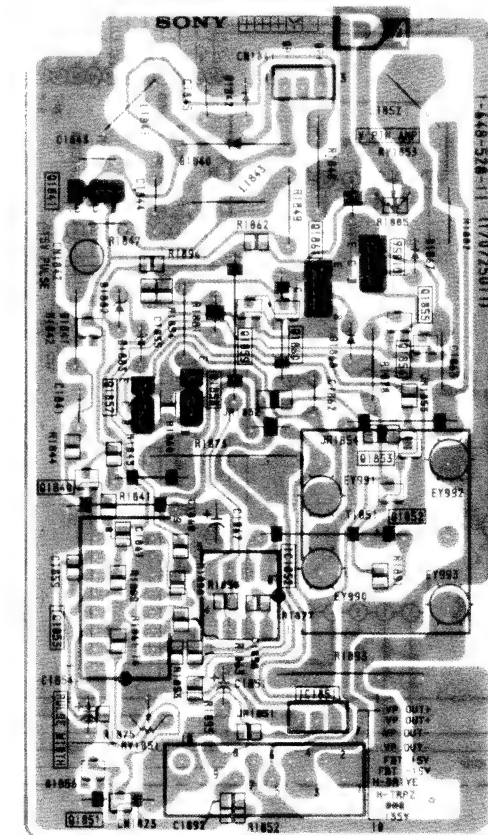
– VM BOARD –



 : Pattern from the side which enables seeing.
 : Pattern of the rear side.



– D4 BOARD –



IFH389F (French Model)

A

B

C

D

E

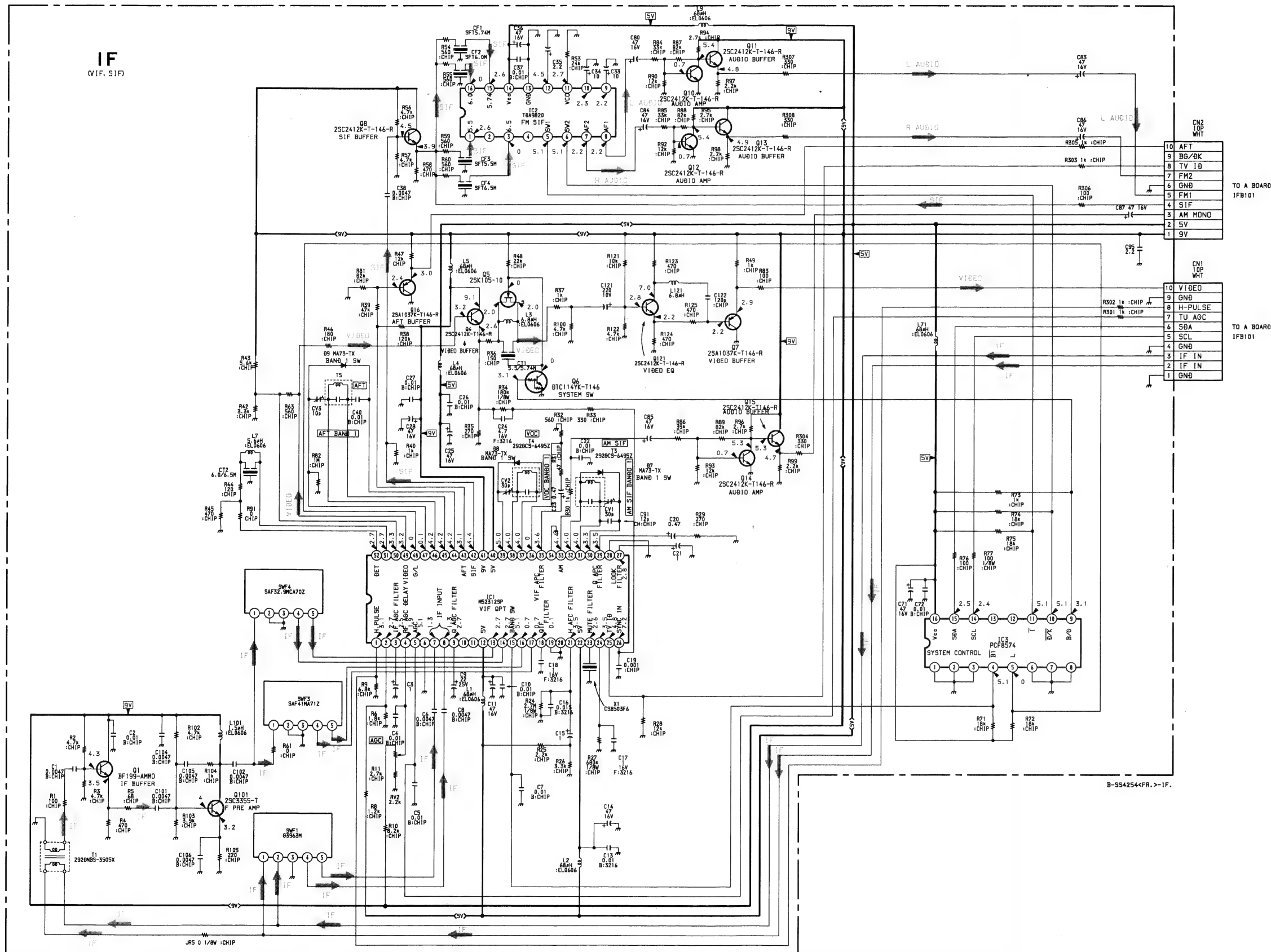
F

G

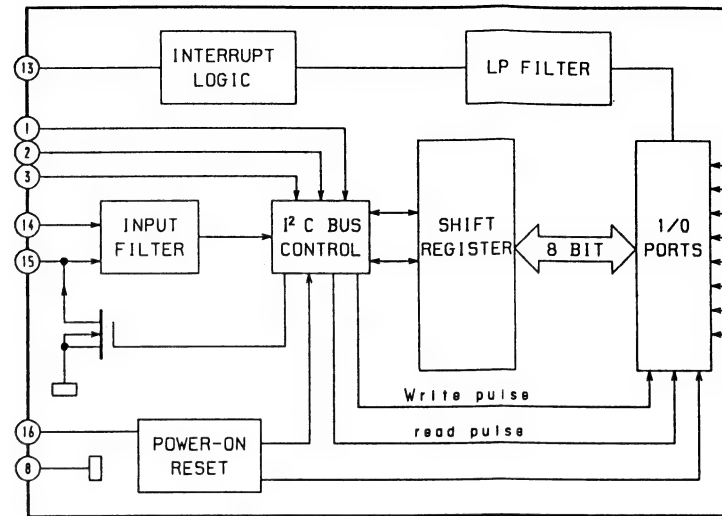
H

I

J



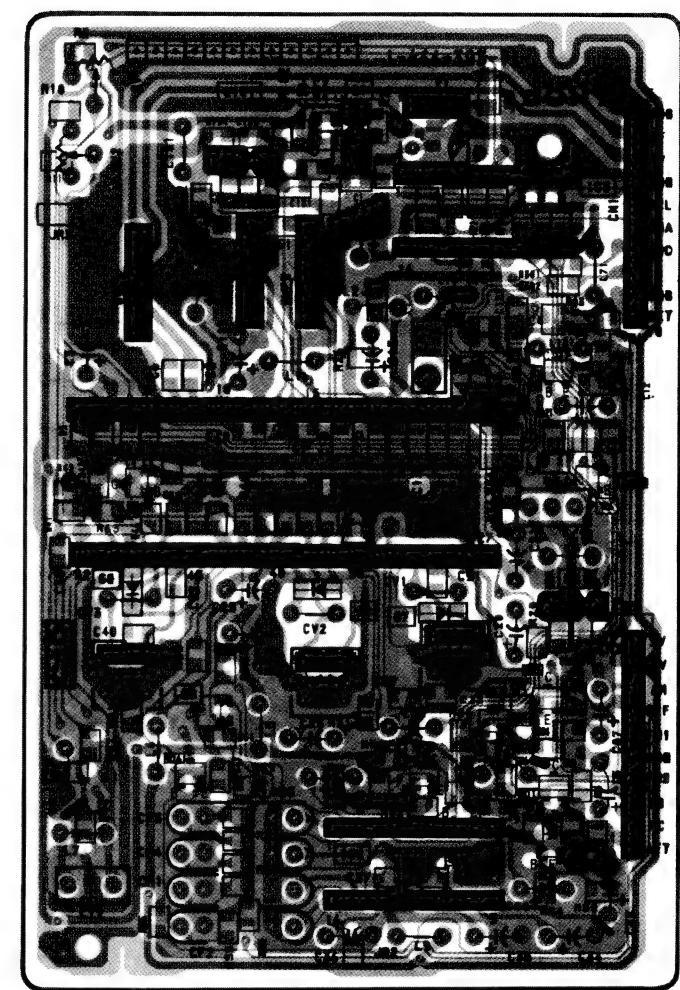
IF BOARD IC3 PC8574 (French Model)



IF

[VIF, SIF]

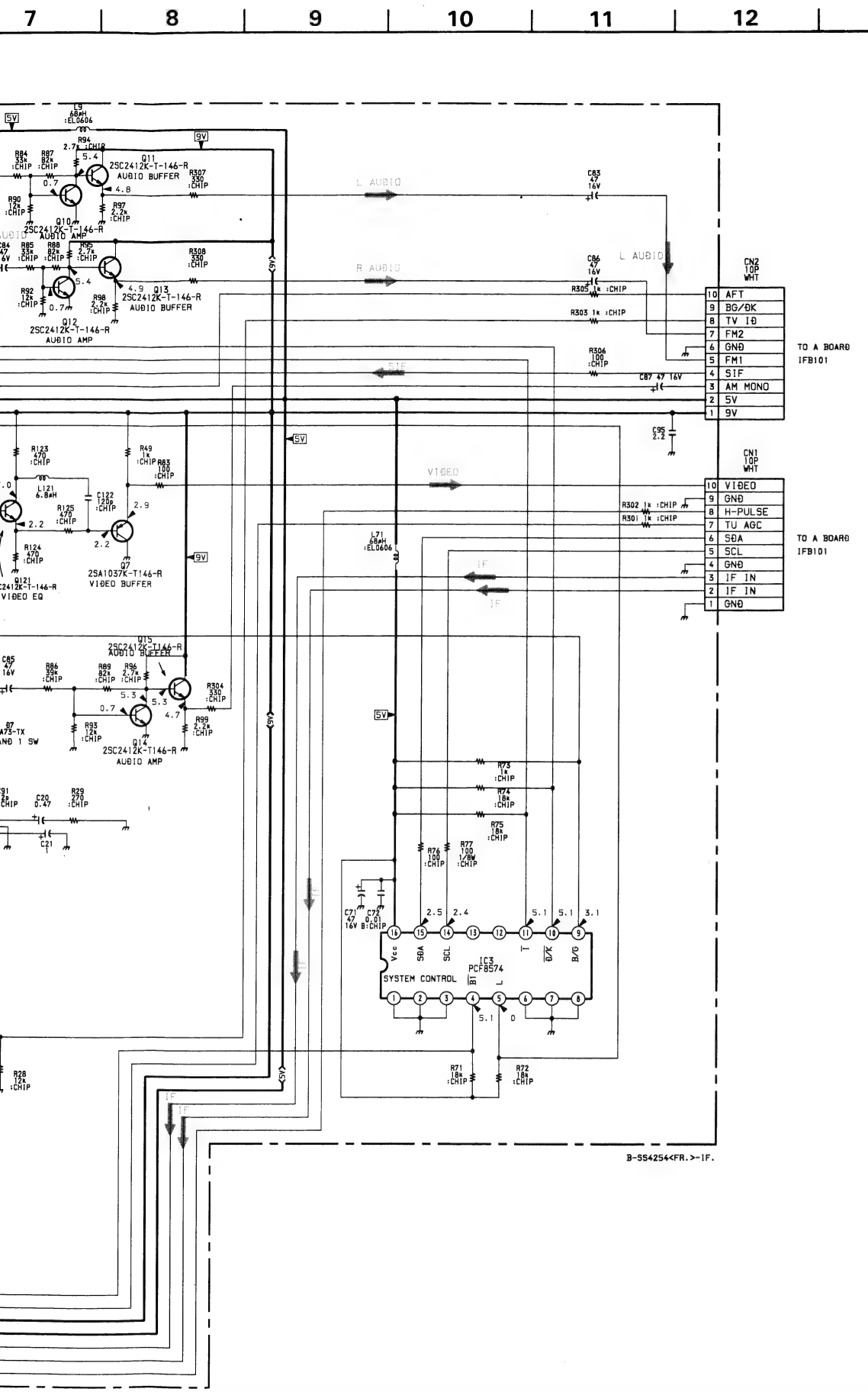
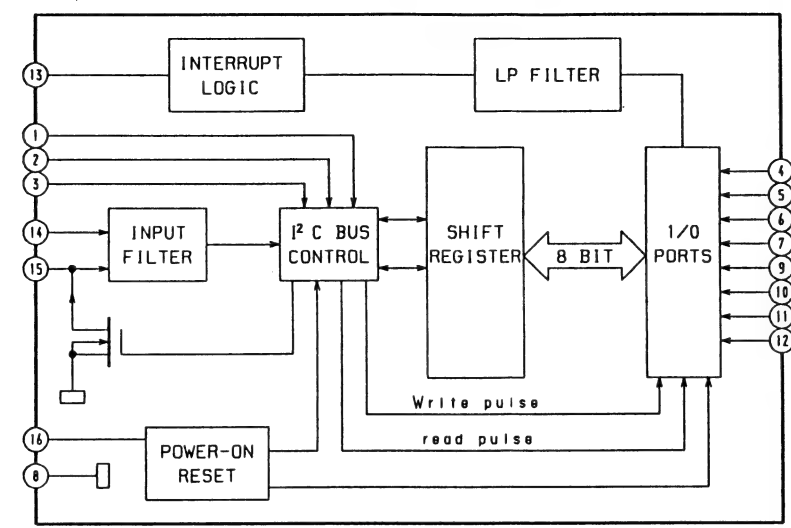
– IF BOARD – (French Model)

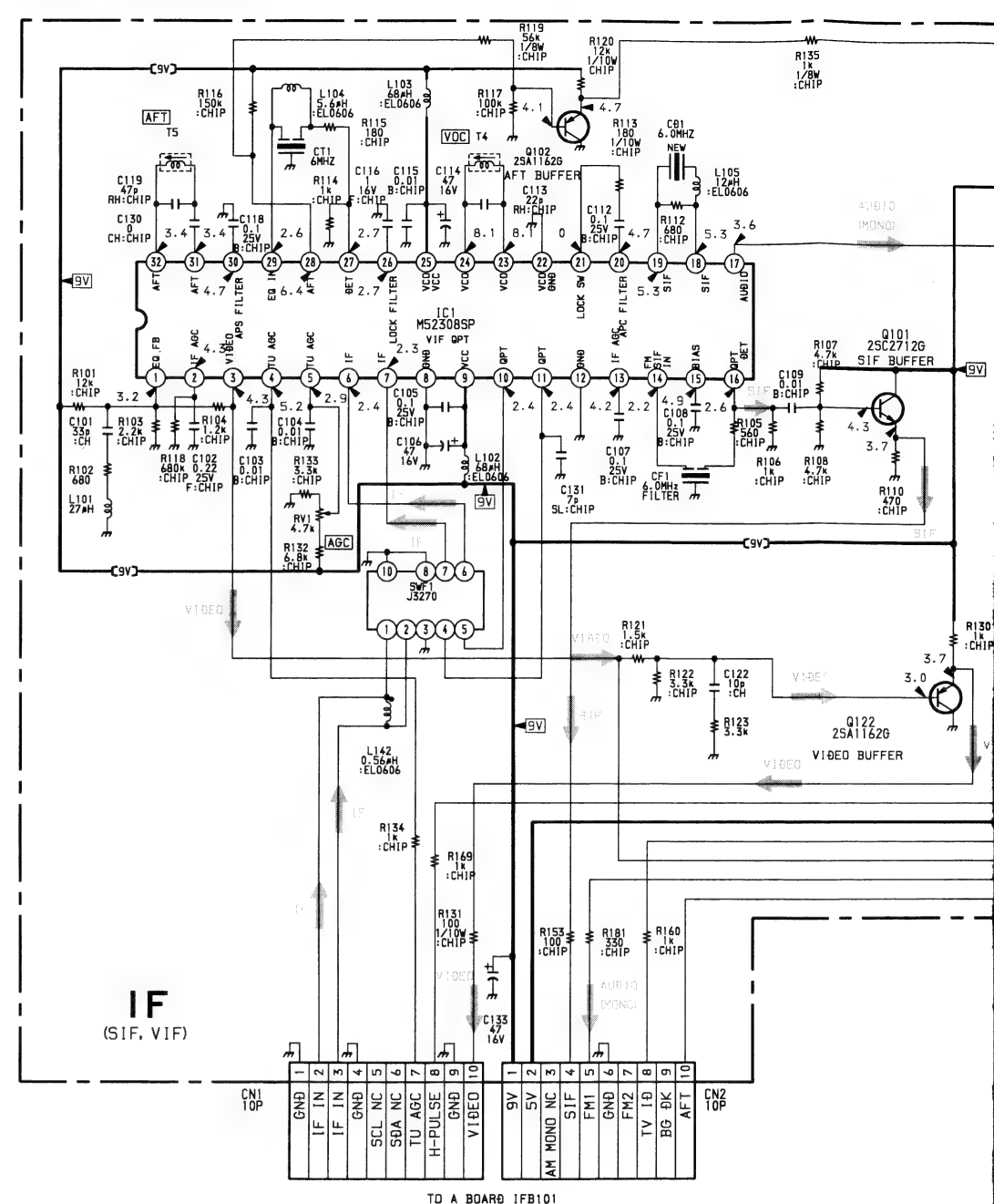


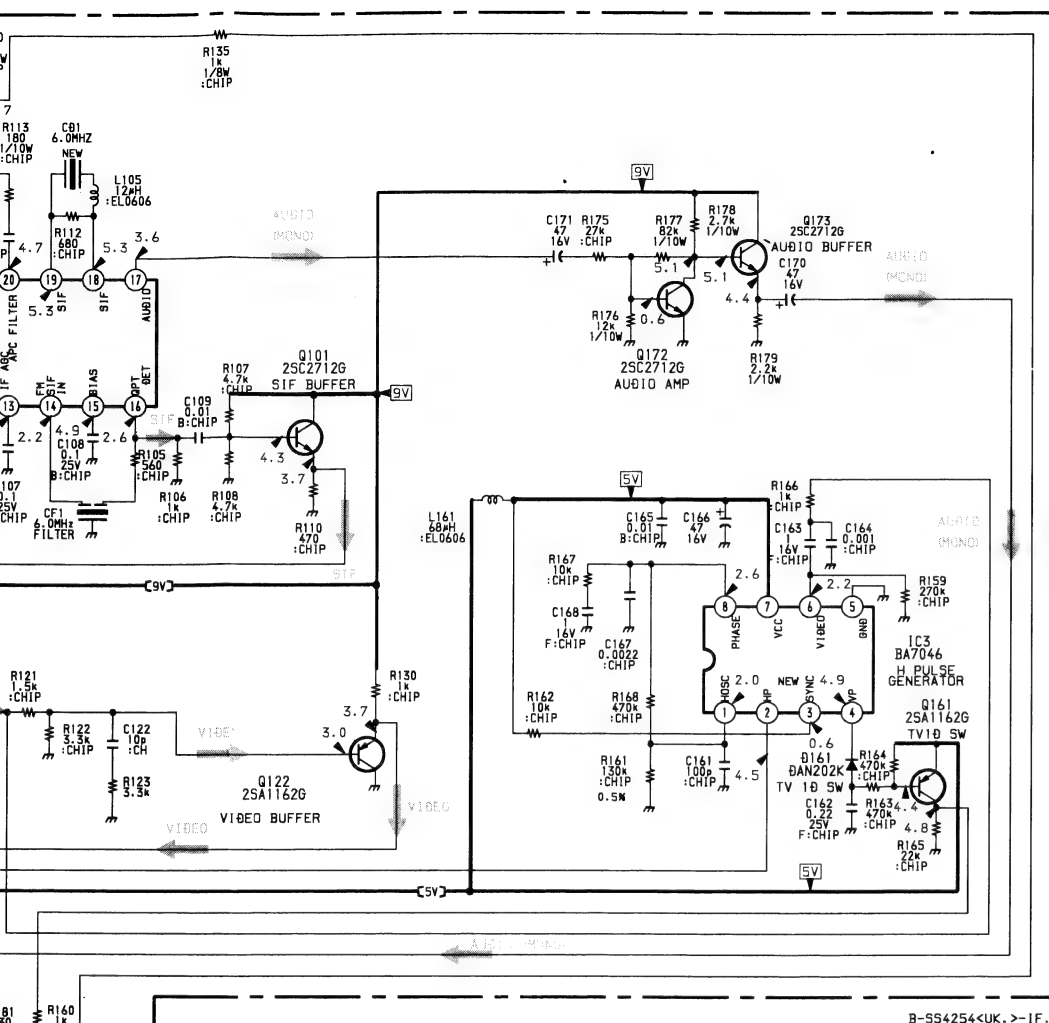
Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

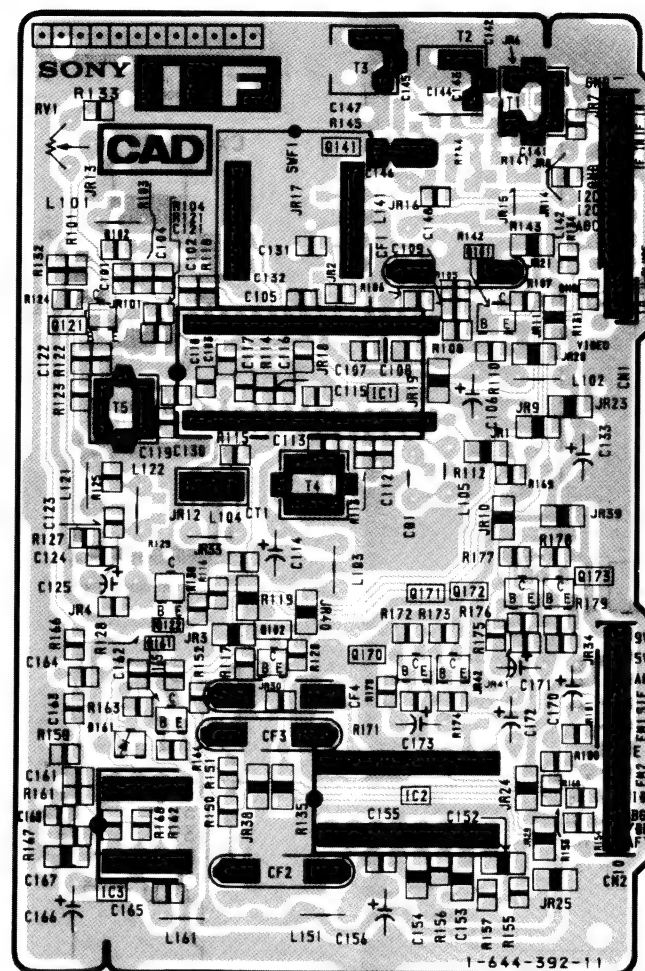
IF BOARD IC3 PC8574 (French Model)



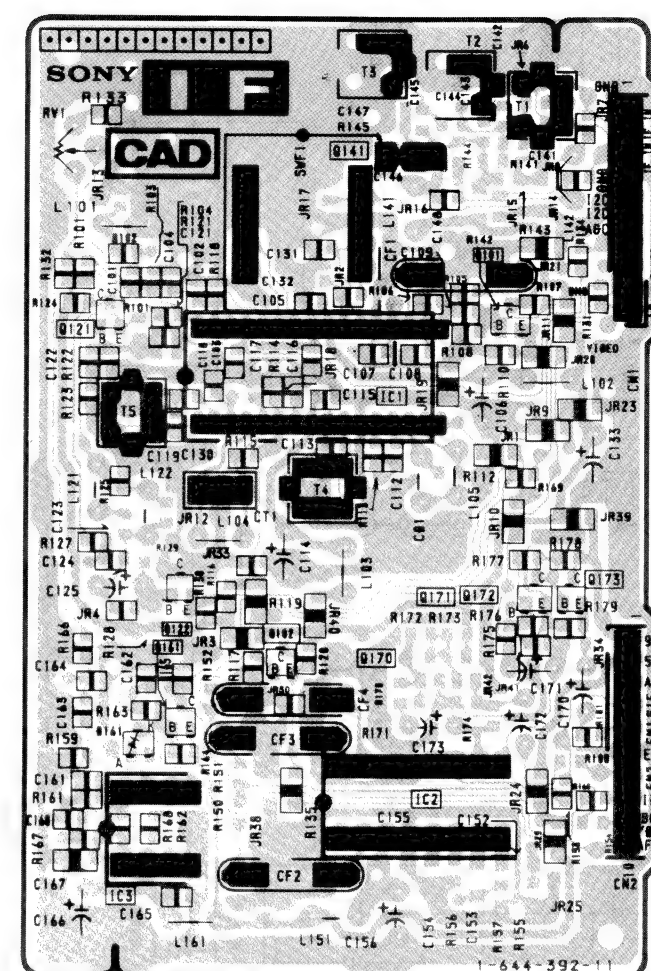




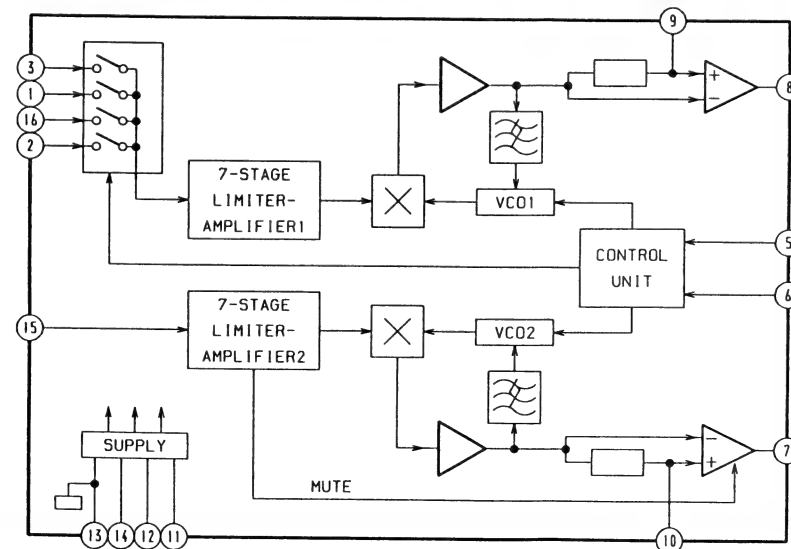
IF BOARD - (AEP, Italian, Spanish Model)



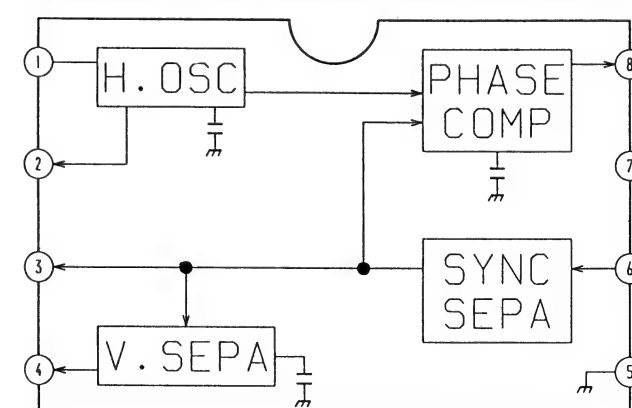
IF BOARD - (UK Model)



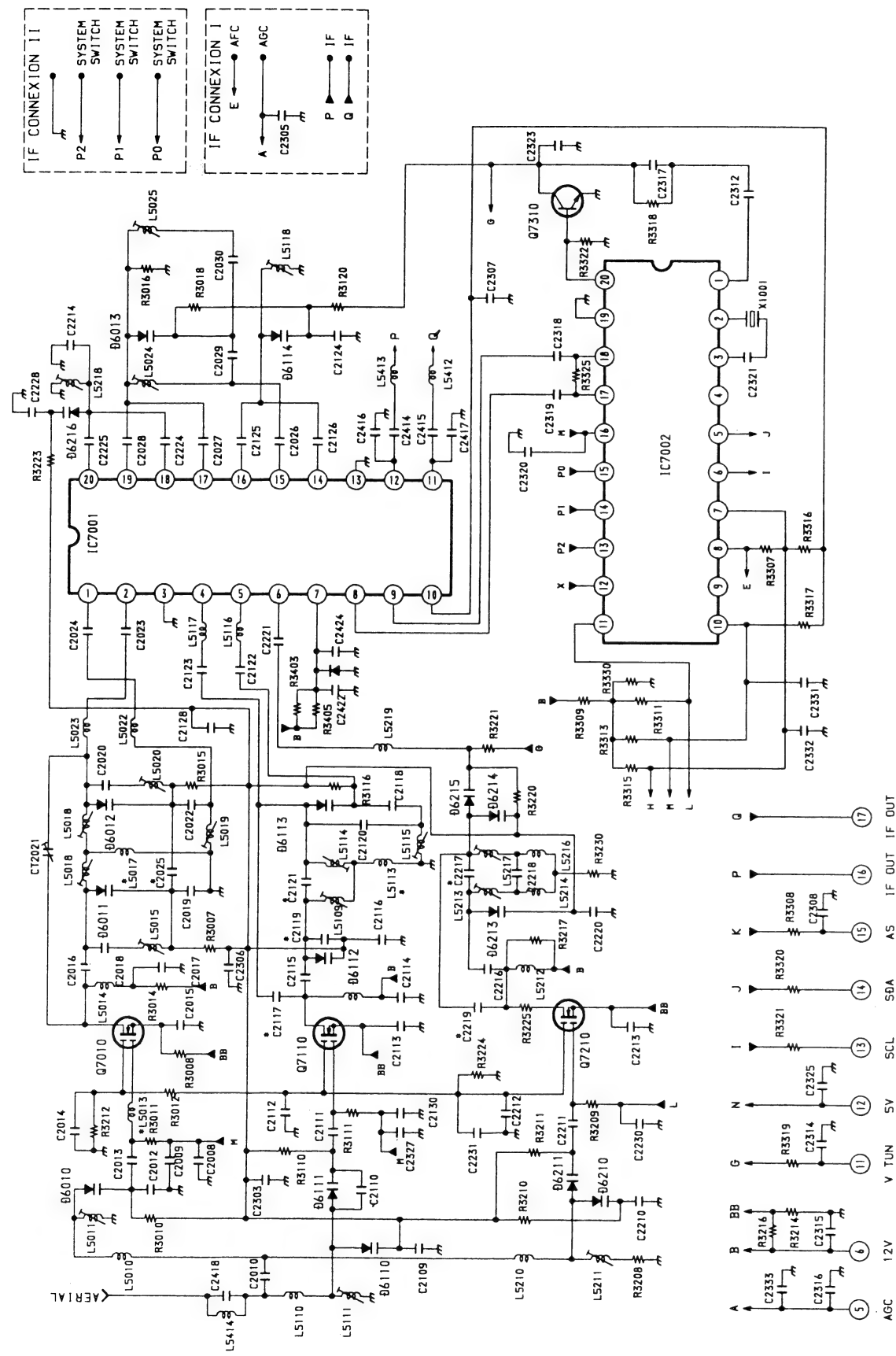
IF BOARD IC2 TDA9820 (AEP, Italian, Spanish Model)



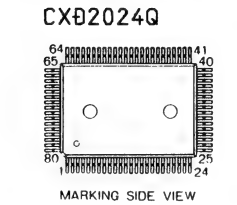
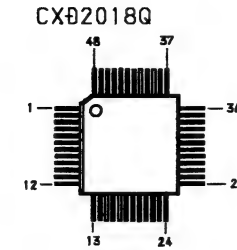
IF BOARD IC3 BA7046 (AEP, Italian, Spanish, UK Model)



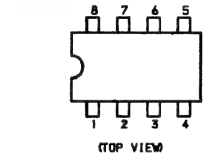
5-4. SCHEMATIC DIAGRAM OF TUNER
A BOARD TU101 UV916H



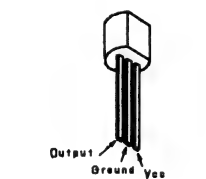
5-5. SEMICONDUCTORS



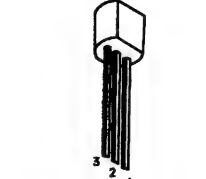
LM358D
LM393P
LM358P
T0A2822M
T0A4605-3
TEA2114
APC358C
APC393C
X24C16P



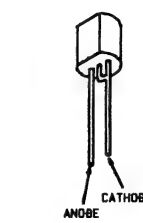
MC78L08ACPRP
MC78L12ACPRP



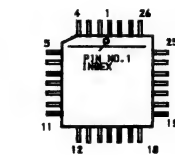
NJM78L05A
NJM78L05F
NJM78M09FA



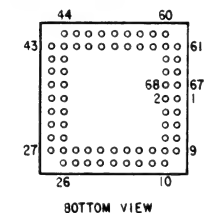
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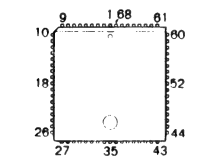
SBX1610-11



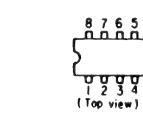
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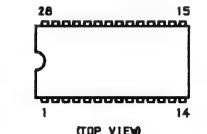
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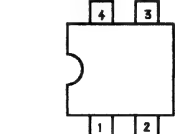
S0A9085



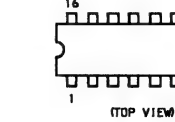
S0A91872X-GEG
S0A91883X-GEG
T0A6612



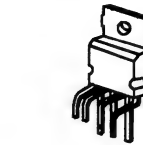
SFH617G-1



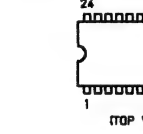
SN74LS221N
T0A466A/V2
T0A9160/N2



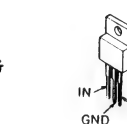
T0A2052
T0A8138
T0A8179S



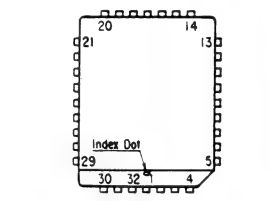
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T0A9145/N1



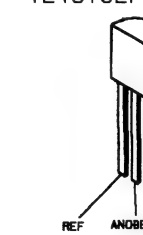
TEA7605



TMS27PC010A-15FML



TL431CLP



BF199



BF871



BUZ91A-E3155



0TA124EK
0TA144EK
0TA144TK
0TC114EK
0TC124EK
0TC144EK
2SA1037K-R
2SA1162-G
2SC1623-L5L6
2SC2412K-T-146-R
2SC2412K-T-146-QR
2SC2413KQ



JA101-Q
JC501-Q-AMMO
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2SA1091-0
2SC1890A-0
2SC2551-0



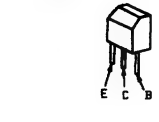
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2SB772-Q
2SC2688-LK



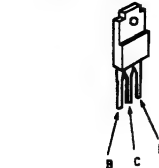
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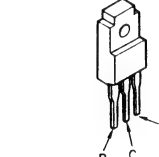
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2SD774-34



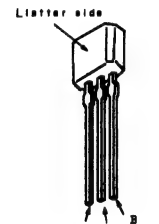
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2SC3298B-Y
2SD1763A



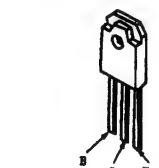
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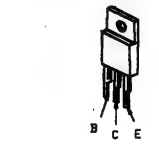
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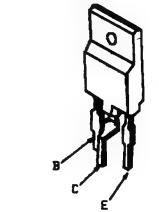
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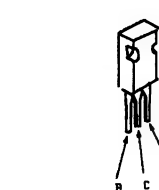
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2SD2012



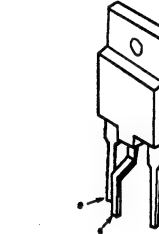
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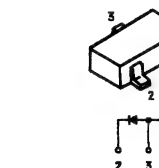
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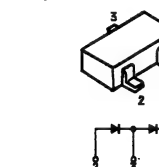
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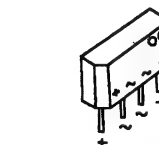
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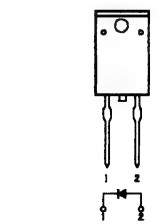
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1SS226




05L60



NOTE :

- ## 6-1. CHASSIS

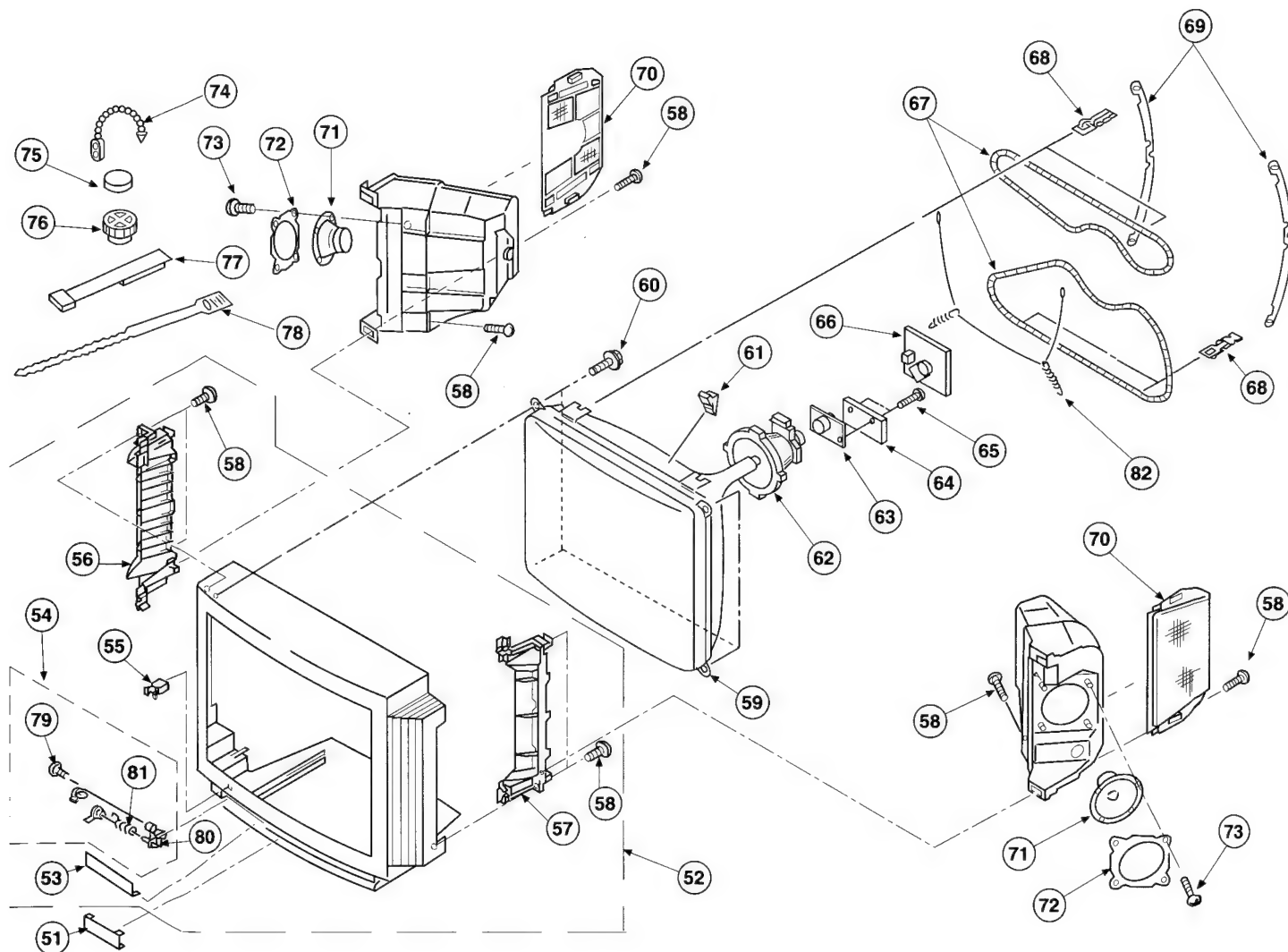
- The components identified by shading and marked  are critical for safety.
- Replace only with the part number specified.



REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
1	*1-648-314-11	H1 BOARD		12	*A-1632-218-A	A BOARD, COMPLETE (KV-A2941A/A2941D/A2941K)	
2	*1-652-942-11	H2 BOARD			*A-1632-222-A	A BOARD, COMPLETE (KV-A2941B)	
					*A-1632-221-A	A BOARD, COMPLETE (KV-A2943E)	
4	*1-648-312-12	F1 BOARD			*A-1632-192-A	A BOARD, COMPLETE (KV-A2942U)	
				13	1-693-185-11	TUNER (UV916H) (KV-A2941A/A2941B/A2941D/A2943E/A2941K)	
					1-693-184-11	TUNER (U944C) (KV-A2942U)	
				14	*A-1635-023-A	M2 BOARD, COMPLETE	
7	*A-1624-018-A	F2 BOARD, COMPLETE (KV-A2941A/A2941D)		15	*A-1630-249-A	A3 BOARD, COMPLETE (KV-A2941A/A2941B/A2941D/A2941K)	
	*A-1624-036-A	F2 BOARD, COMPLETE (KV-A2941B/A2943E/A2941K/A2942U)			*A-1630-252-A	A3 BOARD, COMPLETE (KV-A2943E)	
					*A-1630-219-A	A3 BOARD, COMPLETE (KV-A2942U)	
8	*A-1642-097-A	D BOARD, COMPLETE		16	*A-1649-009-A	K1 BOARD, COMPLETE	
				17	*A-1651-064-A	J BOARD, COMPLETE	
10	*A-1640-109-A	D5 BOARD, COMPLETE		18	4-202-510-11	COVER, REAR	
11	*A-1642-102-A	D4 BOARD, COMPLETE		19	4-039-358-11	SCREW (4X16), (+) BV TAPPING	

6-2. PICTURE TUBE

The components identified by shading and marked Δ are critical for safety.
Replace only with the part number specified.



REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
51	4-202-492-31	WINDOW, ORNAMENTAL		66	*A-1638-042-A	C BOARD, COMPLETE	
52	X-4200-138-1	CABINET ASSY (WITH BEZEL ASSY)	53"58, 79"81	67	Δ 1-406-807-11	COIL, DEMAGNETIZATION	
53	4-202-493-01	DOOR		68	4-202-415-01	CLIP, DGC (29")	
54	X-4031-244-1	DAMPER ASSY	79"81	69	4-202-416-01	BAND, DGC	
55	4-392-036-01	CATCHER, PUSH		70	X-4200-136-1	GRILLE ASSY, SPEAKER	
56	*4-202-509-01	HOLDER (L), SPEAKER		71	1-544-475-21	SPEAKER	
57	*4-202-508-01	HOLDER (R), SPEAKER		72	4-202-469-01	CLAMP, SPEAKER	
58	4-039-358-01	SCREW (4x16), BV TAPPING		73	4-039-358-11	SCREW (4x16), (+) BV TAPPING	
59	Δ 8-733-853-05	PICTURE TUBE (M68LCT60X)		74	4-308-870-00	CLIP, LEAD WIRE	
60	4-036-188-01	SCREW (M), PT		75	1-452-032-00	MAGNET, DISK; 10MM \emptyset	
61	3-704-495-01	SPACER, DY		76	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM \emptyset	
62	Δ 8-451-422-11	DEFLECTION YOKE (Y29GXA)		77	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	
63	Δ 1-452-509-41	NECK ASSY, PICTURE TUBE (NA-308)		78	3-701-007-00	BAND, BINDING	
64	*A-1644-040-A	VM BOARD, COMPLETE		79	4-033-184-01	SCREW, SPECIAL	
65	4-039-357-01	SCREW (3X8), (+) BV TAPPING		80	4-041-017-01	SHAFT (MAIN), DAMPER DOOR	
				81	4-041-016-01	SPRING	
				82	4-200-433-01	SPRING, EXTENSION	

ELECTRICAL PARTS LIST

SECTION 3

The components identified by shading and marked Δ are critical for safety.
Replace only with the part number specified.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS

MF : mF, PF : mmF

COILS

MMH : mH, μ H : μ H

F1

F2

A3 (KV-A2941A/A2941B
KV-A2941D/A2941K)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*1-648-312-12	F1 BOARD *****				< TRANSFORMER >	
		< CONNECTOR >				LF661 Δ 1-423-688-11 TRANSFORMER, LINE FILTER (LFT)	
						LF662 Δ 1-424-391-11 TRANSFORMER, LINE FILTER (LFT)	
						(KV-A2941A/A2941D)	
		< FUSE >				< TRANSISTOR >	
						Q661 8-729-920-74 TRANSISTOR 2SC2412K-QR	
						< RESISTOR >	
						R663 Δ 1-244-945-91 CARBON 1M 5% 1/2W	
						R664 Δ 1-205-949-11 WIREWOUND 1.8 5% 10W	
						R665 Δ 1-218-265-11 METAL GLAZE 8.2M 5% 1W	
						R666 1-249-405-11 CARBON 100 5% 1/4W F	
						R667 1-249-430-11 CARBON 12K 5% 1/4W	
						R668 1-249-436-11 CARBON 39K 5% 1/4W	
						R669 Δ 1-205-949-11 WIREWOUND 1.8 5% 10W	
						R671 1-249-417-11 CARBON 1K 5% 1/4W F	
						< RELAY >	
						RY661 Δ 1-515-720-31 RELAY	
						< THERMISTOR >	
						THP661 Δ 1-809-827-11 THERMISTOR, POSITIVE	

						*A-1624-018-A F2 BOARD, COMPLETE (KV-A2941A/A2941D)	

						*A-1624-036-A F2 BOARD, COMPLETE (KV-A2941B/A2943E/ A2941K/A2942U)	
						< CAPACITOR >	
						C661 Δ 1-136-519-12 FILM 0.47MF 20% 300V	
						C662 Δ 1-136-518-12 FILM 0.33MF 20% 300V	
						C664 Δ 1-164-503-61 CERAMIC 0.0022MF 20% 400V	
						C666 1-124-479-11 ELECT 330MF 20% 25V	
						C667 1-126-337-11 ELECT 22MF 20% 50V	
						C672 Δ 1-161-964-61 CERAMIC 0.0047MF 250V	
						C673 Δ 1-161-964-61 CERAMIC 0.0047MF 250V	
						C674 1-125-555-11 ELECT 330MF 20% 400V	
						< CONNECTOR >	
						CN0005 1-508-765-00 PIN, CONNECTOR (5MM PITCH) 3P	
						CN0007 1-508-786-00 PIN, CONNECTOR (5MM PITCH) 2P	
						CN0924 *1-568-878-51 PIN, CONNECTOR 3P	
						CN0925 *1-695-294-11 PIN, CONNECTOR (PC BOARD) 6P	
						CN0929 1-508-784-00 PIN, CONNECTOR (5MM PITCH) 1P	
						CN0931 Δ *1-691-291-11 PIN, CONNECTOR (PC BOARD) 5P	
						< DIODE >	
						D661 8-719-901-33 DIODE 1SS133	
						D663 8-719-510-53 DIODE D4SB60L	
						D664 8-719-109-89 DIODE RD5.6ESB2	

A3 (KV-A2941A/A2941B)
 (KV-A2941D/A2941K)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C1262	1-163-010-11	CERAMIC CHIP 0.0012MF	10% 50V	C3251	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C1263	1-163-014-00	CERAMIC CHIP 0.0027MF	10% 50V	C3252	1-124-910-11	ELECT 47MF	20% 50V
C1264	1-163-014-00	CERAMIC CHIP 0.0027MF	10% 50V	C3253	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1265	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C3255	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C1266	1-163-022-00	CERAMIC CHIP 0.012MF	10% 50V	C3256	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1267	1-163-986-00	CERAMIC CHIP 0.027MF	10% 25V	C3257	1-137-437-11	FILM 0.0056MF	5% 50V
C1268	1-163-986-00	CERAMIC CHIP 0.027MF	10% 25V	C3259	1-126-101-11	ELECT 100MF	20% 16V
C1269	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C3260	1-163-077-91	CERAMIC CHIP 0.1MF	50V
C1270	1-164-348-11	CERAMIC CHIP 0.12MF	10% 25V	C3264	1-124-907-11	ELECT 10MF	20% 50V
C1271	1-124-916-11	ELECT 22MF	20% 50V	C3265	1-124-907-11	ELECT 10MF	20% 50V
C1272	1-124-910-11	ELECT 47MF	20% 50V	C3266	1-124-907-11	ELECT 10MF	20% 50V
C3201	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C3267	1-130-772-00	FILM 0.22MF	5% 63V
C3202	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C3272	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C3203	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C3273	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C3204	1-136-157-00	FILM 0.022MF	5% 50V	C3274	1-124-910-11	ELECT 47MF	20% 50V
C3205	1-136-157-00	FILM 0.022MF	5% 50V	C3275	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C3206	1-136-165-00	FILM 0.1MF	5% 50V	C3276	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C3207	1-136-161-00	FILM 0.047MF	5% 50V	C3277	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C3208	1-163-137-00	CERAMIC CHIP 680PF	5% 50V	C3278	1-163-023-00	CERAMIC CHIP 0.015MF	10% 50V
C3209	1-136-165-00	FILM 0.1MF	5% 50V	C3279	1-163-023-00	CERAMIC CHIP 0.015MF	10% 50V
C3210	1-163-137-00	CERAMIC CHIP 680PF	5% 50V	C3280	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C3211	1-136-161-00	FILM 0.047MF	5% 50V	C3281	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C3212	1-124-907-11	ELECT 10MF	20% 50V	C3282	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C3213	1-124-907-11	ELECT 10MF	20% 50V	C3283	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C3214	1-136-165-00	FILM 0.1MF	5% 50V	C3284	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C3215	1-136-165-00	FILM 0.1MF	5% 50V	C3285	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C3216	1-124-907-11	ELECT 10MF	20% 50V	C3286	1-124-907-11	ELECT 10MF	20% 50V
C3217	1-124-907-11	ELECT 10MF	20% 50V	C3287	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C3218	1-137-368-11	FILM 0.0047MF	5% 50V	C3288	1-124-907-11	ELECT 10MF	20% 50V
C3219	1-124-916-11	ELECT 22MF	20% 63V	C3289	1-124-907-11	ELECT 10MF	20% 50V
C3220	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C3290	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C3221	1-136-169-00	FILM 0.22MF	5% 50V	C3291	1-163-018-00	CERAMIC CHIP 0.0056MF	10% 50V
C3222	1-124-927-11	ELECT 4.7MF	20% 50V	C3293	1-124-907-11	ELECT 10MF	20% 50V
C3223	1-124-927-11	ELECT 4.7MF	20% 50V	< CONNECTOR >			
C3224	1-136-169-00	FILM 0.22MF	5% 50V	CN0201	1-695-300-11	CONNECTOR, BOARD TO BOARD 20P	
C3225	1-136-169-00	FILM 0.22MF	5% 50V	CN0227	*1-564-509-11	PLUG, CONNECTOR 6P	
C3226	1-136-169-00	FILM 0.22MF	5% 50V	CN0235	*1-564-506-11	PLUG, CONNECTOR 3P	
C3227	1-136-175-00	FILM 0.68MF	5% 50V	CN0246	*1-564-506-11	PLUG, CONNECTOR 3P	
C3228	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	< DIODE >			
C3229	1-137-368-11	FILM 0.0047MF	5% 50V	D3201	8-719-110-14	DIODE RD9.1ESB3	
C3230	1-136-161-00	FILM 0.047MF	5% 50V	< FERRITE BEAD >			
C3231	1-124-911-11	ELECT 220MF	20% 50V	FB1101	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
C3232	1-124-927-11	ELECT 4.7MF	20% 50V	FB1105	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
C3233	1-136-015-00	CERAMIC CHIP 0.0033MF	50V	FB3201	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
C3234	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	< IC >			
C3235	1-163-036-00	CERAMIC CHIP 0.068MF	50V	IC1251	8-759-257-64	IC TDA7317	
C3236	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	IC3201	8-759-267-99	IC M69032P	
C3237	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	IC3202	8-759-300-71	IC HD14053BFP	
C3238	1-124-126-00	ELECT 47MF	20% 10V	IC3203	8-752-069-79	IC CXA1875M-T4	
C3239	1-163-036-00	CERAMIC CHIP 0.068MF	50V	IC3204	8-759-909-71	IC BA4558F	
C3240	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	IC3205	8-759-266-65	IC TDA6622-5	
C3241	1-163-018-00	CERAMIC CHIP 0.0056MF	10% 50V	IC3206	8-759-633-83	IC M50198P	
C3242	1-163-018-00	CERAMIC CHIP 0.0056MF	10% 50V	< COIL >			
C3243	1-163-038-00	CERAMIC CHIP 0.1MF	25V	L1101	1-408-405-00	INDUCTOR 4.7UH	
C3244	1-124-477-11	ELECT 47MF	20% 16V				
C3245	1-163-237-11	CERAMIC CHIP 27PF	5% 50V				
C3246	1-163-237-11	CERAMIC CHIP 27PF	5% 50V				
C3247	1-163-038-00	CERAMIC CHIP 0.1MF	25V				
C3248	1-124-477-11	ELECT 47MF	20% 16V				
C3250	1-163-038-00	CERAMIC CHIP 0.1MF	25V				

A3 (KV-A2941A/A2941B KV-A2941D/A2941K)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
L1251	1-408-421-00	INDUCTOR	100UH	R3216	1-216-049-00	METAL GLAZE	1K 5% 1/10W
L3201	1-408-421-00	INDUCTOR	100UH	R3217	1-216-097-00	METAL GLAZE	100K 5% 1/10W
< TRANSISTOR >				R3218	1-216-198-91	METAL GLAZE	1K 5% 1/8W
Q1251	8-729-920-74	TRANSISTOR	2SC2412K-QR	R3219	1-216-198-91	METAL GLAZE	1K 5% 1/8W
Q1252	8-729-920-74	TRANSISTOR	2SC2412K-QR	R3220	1-216-699-11	METAL CHIP	100K 0.50% 1/10W
Q3203	8-729-216-22	TRANSISTOR	2SA1162-G	R3221	1-216-077-00	METAL GLAZE	15K 5% 1/10W
Q3205	8-729-920-74	TRANSISTOR	2SC2412K-QR	R3222	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
Q3206	8-729-920-74	TRANSISTOR	2SC2412K-QR	R3223	1-216-109-00	METAL GLAZE	330K 5% 1/10W
Q3207	8-729-216-22	TRANSISTOR	2SA1162-G	R3224	1-216-077-00	METAL GLAZE	15K 5% 1/10W
Q3208	8-729-920-74	TRANSISTOR	2SC2412K-QR	R3225	1-216-079-00	METAL GLAZE	18K 5% 1/10W
Q3209	8-719-918-98	TRANSISTOR	SLP253B-40	R3226	1-216-077-00	METAL GLAZE	15K 5% 1/10W
< RESISTOR >				R3227	1-216-220-00	METAL GLAZE	8.2K 5% 1/8W
JR3201	1-216-295-00	METAL GLAZE	0 5% 1/10W	R3228	1-216-013-00	METAL GLAZE	33 5% 1/10W
JR3202	1-216-295-00	METAL GLAZE	0 5% 1/10W	R3229	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
JR3203	1-216-295-00	METAL GLAZE	0 5% 1/10W	R3230	1-216-079-00	METAL GLAZE	18K 5% 1/10W
JR3204	1-216-295-00	METAL GLAZE	0 5% 1/10W	R3231	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
JR3206	1-216-295-00	METAL GLAZE	0 5% 1/10W	R3232	1-216-070-00	METAL GLAZE	7.5K 5% 1/10W
JR3208	1-216-296-91	METAL GLAZE	0 5% 1/8W	R3233	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
JR3209	1-216-296-91	METAL GLAZE	0 5% 1/8W	R3234	1-216-097-00	METAL GLAZE	100K 5% 1/10W
JR3210	1-216-296-91	METAL GLAZE	0 5% 1/8W	R3235	1-216-097-00	METAL GLAZE	100K 5% 1/10W
JR3211	1-216-296-91	METAL GLAZE	0 5% 1/8W	R3236	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R1251	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R3237	1-216-295-00	METAL GLAZE	0 5% 1/10W
R1252	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R3238	1-216-295-00	METAL GLAZE	0 5% 1/10W
R1253	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R3239	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R1254	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R3240	1-216-296-91	METAL GLAZE	0 5% 1/8W
R1255	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R3241	1-216-121-00	METAL GLAZE	1M 5% 1/10W
R1256	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R3242	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R1257	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R3243	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R1258	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R3244	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R1259	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R3245	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R1260	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R3246	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R1261	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R3247	1-216-109-00	METAL GLAZE	330K 5% 1/10W
R1262	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R3248	1-216-033-00	METAL GLAZE	220 5% 1/10W
R1263	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R3249	1-216-033-00	METAL GLAZE	220 5% 1/10W
R1264	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R3250	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R1265	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R3253	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R1266	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R3254	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R1267	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R3255	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R1268	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R3256	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R1269	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R3257	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R1270	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R3258	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R1271	1-216-033-00	METAL GLAZE	220 5% 1/10W	R3259	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R1272	1-216-033-00	METAL GLAZE	220 5% 1/10W	R3260	1-216-109-00	METAL GLAZE	330K 5% 1/10W
R3201	1-216-033-00	METAL GLAZE	220 5% 1/10W	R3261	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R3202	1-216-033-00	METAL GLAZE	220 5% 1/10W	R3262	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R3203	1-216-041-00	METAL GLAZE	470 5% 1/10W	R3263	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R3204	1-216-041-00	METAL GLAZE	470 5% 1/10W	R3264	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R3205	1-216-070-00	METAL GLAZE	7.5K 5% 1/10W	R3265	1-216-295-00	METAL GLAZE	0 5% 1/10W
R3206	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R3266	1-216-295-00	METAL GLAZE	0 5% 1/10W
R3207	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R3267	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R3208	1-216-070-00	METAL GLAZE	7.5K 5% 1/10W	R3268	1-216-295-00	METAL GLAZE	0 5% 1/10W
R3209	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R3270	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R3210	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R3271	1-216-295-00	METAL GLAZE	0 5% 1/10W
R3211	1-216-294-00	METAL GLAZE	10M 5% 1/8W	R3272	1-216-295-00	METAL GLAZE	0 5% 1/10W
R3212	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R3275	1-216-295-00	METAL GLAZE	0 5% 1/10W
R3213	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R3277	1-216-295-00	METAL GLAZE	0 5% 1/10W
R3214	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R3278	1-216-238-91	METAL GLAZE	47K 5% 1/8W
R3215	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R3288	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R3289	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R3290	1-216-033-00	METAL GLAZE	220 5% 1/10W

A3 (KV-A2941A/A2941B
KV-A2941D/A2941K)A3 (KV-A2943E
KV-A2942U)

REF.NO.	PART NO.	DESCRIPTION	REMARK
R3291	1-216-033-00	METAL GLAZE 220 5%	1/10W
R3292	1-216-025-00	METAL GLAZE 100 5%	1/10W
R3293	1-216-025-00	METAL GLAZE 100 5%	1/10W
R3294	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R3295	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R3296	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R3297	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R3298	1-247-807-31	CARBON 100 5%	1/4W
R3299	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R3300	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R3301	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R3302	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R3303	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R3304	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R3307	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R3308	1-216-246-91	METAL GLAZE 100K 5%	1/8W
R3309	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R3310	1-216-081-00	METAL GLAZE 22K 5%	1/10W

< CRYSTAL >

X3201 1-567-505-11 OSCILLATOR, CRYSTAL

*A-1630-252-A A3 BOARD, COMPLETE (KV-A2943E)

*A-1630-219-A A3 BOARD, COMPLETE (KV-A2942U)

< FILTER >

BP1101 1-239-047-11 FILTER, BAND PASS (KV-A2943E)
 1-236-238-11 FILTER, BAND PASS (KV-A2942U)
 CF1101 1-409-333-00 TRAP, CERAMIC (6.0MHZ) (KV-A2942U)

< CAPACITOR >

C1101	1-126-101-11	ELECT 100MF	20%	16V
C1102	1-126-101-11	ELECT 100MF	20%	16V
C1103	1-163-077-91	CERAMIC CHIP 0.1MF		50V
C1104	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C1105	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V
C1106	1-163-383-11	CERAMIC CHIP 180PF	5%	50V
C1107	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C1108	1-163-059-00	CERAMIC CHIP 0.01MF		50V
C1109	1-163-033-00	CERAMIC CHIP 0.022MF		50V
C1110	1-164-336-11	CERAMIC CHIP 0.33MF		25V
C1111	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C1112	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V
C1113	1-124-477-11	ELECT 47MF	20%	16V
C1114	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C1115	1-124-477-11	ELECT 47MF	20%	16V
C1116	1-106-228-00	MYLAR 0.22MF	10%	100V
C1117	1-163-081-00	CERAMIC CHIP 0.22MF		25V
C1118	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C1119	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C1120	1-163-193-00	CERAMIC CHIP 330PF	5%	50V
C1121	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C1122	1-163-081-00	CERAMIC CHIP 0.22MF		25V
C1123	1-106-228-00	MYLAR 0.22MF	10%	100V
C1124	1-124-477-11	ELECT 47MF	20%	16V
C1125	1-124-477-11	ELECT 47MF	20%	16V
C1126	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C1127	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1128	1-124-477-11	ELECT 47MF	20% 16V
C1129	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1130	1-163-205-00	CERAMIC CHIP 0.001MF	10% 50V
C1131	1-163-059-00	CERAMIC CHIP 0.01MF	50V
C1132	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1133	1-124-907-11	ELECT 10MF	20% 50V
C1134	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1135	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1136	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C1137	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1138	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C1139	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C1140	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C1141	1-163-205-00	CERAMIC CHIP 0.001MF	5% 50V
C1142	1-163-057-00	CERAMIC CHIP 0.0068MF	50V
C1143	1-163-003-11	CERAMIC CHIP 330PF	10% 50V
C1144	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C1145	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C1146	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1147	1-124-477-11	ELECT 47MF	20% 16V
C1148	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C1149	1-124-477-11	ELECT 47MF	20% 16V
C1150	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1151	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1152	1-124-477-11	ELECT 47MF	20% 16V
C1153	1-163-087-00	CERAMIC CHIP 4PF	0.25PF 50V
C1154	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1155	1-124-477-11	ELECT 47MF	20% 16V
C1156	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1157	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1158	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1159	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C1251	1-163-009-11	CERAMIC CHIP 0.001MF	(KV-A2942U) 10% 50V
C1252	1-163-010-11	CERAMIC CHIP 0.0012MF	10% 50V
C1253	1-163-014-00	CERAMIC CHIP 0.0027MF	10% 50V
C1254	1-163-014-00	CERAMIC CHIP 0.0027MF	10% 50V
C1255	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1256	1-163-022-00	CERAMIC CHIP 0.012MF	10% 50V
C1257	1-163-986-00	CERAMIC CHIP 0.027MF	10% 25V
C1258	1-163-986-00	CERAMIC CHIP 0.027MF	10% 25V
C1259	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1260	1-164-348-11	CERAMIC CHIP 0.12MF	10% 25V
C1261	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1262	1-163-010-11	CERAMIC CHIP 0.0012MF	10% 50V
C1263	1-163-014-00	CERAMIC CHIP 0.0027MF	10% 50V
C1264	1-163-014-00	CERAMIC CHIP 0.0027MF	10% 50V
C1265	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1266	1-163-022-00	CERAMIC CHIP 0.012MF	10% 50V
C1267	1-163-986-00	CERAMIC CHIP 0.027MF	10% 25V
C1268	1-163-986-00	CERAMIC CHIP 0.027MF	10% 25V
C1269	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1270	1-164-348-11	CERAMIC CHIP 0.12MF	10% 25V
C1271	1-124-916-11	ELECT 22MF	2% 50V
C1272	1-124-910-11	ELECT 47MF	2% 50V
C3201	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C3202	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C3203	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C3204	1-137-128-91	FILM 0.022MF	5% 63V

A3 (KV-A2943E KV-A2942U)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C3205	1-137-128-91	FILM 0.022MF	5% 63V	C3272	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C3206	1-136-165-00	FILM 0.1MF	5% 50V	C3273	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C3207	1-136-187-11	FILM 0.047MF	5% 63V	C3274	1-124-910-11	ELECT 47MF	20% 50V
C3208	1-163-137-00	CERAMIC CHIP 680PF	5% 50V	C3275	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C3209	1-136-165-00	FILM 0.1MF	5% 50V	C3276	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C3210	1-163-137-00	CERAMIC CHIP 680PF	5% 50V	C3277	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C3211	1-136-187-11	FILM 0.047MF	5% 63V	C3278	1-163-023-00	CERAMIC CHIP 0.015MF	10% 50V
C3212	1-124-907-11	ELECT 10MF	20% 50V	C3279	1-163-023-00	CERAMIC CHIP 0.015MF	10% 50V
C3213	1-124-907-11	ELECT 10MF	20% 50V	C3280	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C3214	1-136-165-00	FILM 0.1MF	5% 50V	C3281	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C3215	1-136-165-00	FILM 0.1MF	5% 50V	C3282	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C3216	1-124-907-11	ELECT 10MF	20% 50V	C3283	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C3217	1-124-907-11	ELECT 10MF	20% 50V	C3284	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C3218	1-137-368-11	FILM 0.0047MF	5% 50V	C3285	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C3219	1-124-916-11	ELECT 22MF	20% 63V	C3286	1-124-907-11	ELECT 10MF	20% 50V
C3220	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C3287	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C3221	1-136-169-00	FILM 0.22MF	5% 50V	C3288	1-124-907-11	ELECT 10MF	20% 50V
C3222	1-124-927-11	ELECT 4.7MF	20% 50V	C3289	1-124-907-11	ELECT 10MF	20% 50V
C3223	1-124-927-11	ELECT 4.7MF	20% 50V	C3290	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C3224	1-136-169-00	FILM 0.22MF	5% 50V	< CONNECTOR >			
C3225	1-136-169-00	FILM 0.22MF	5% 50V	CN0201	1-695-300-11	CONNECTOR, BOARD TO BOARD 20P	
C3226	1-136-169-00	FILM 0.22MF	5% 50V	CN0227	*1-564-509-11	PLUG, CONNECTOR 6P	
C3227	1-136-175-00	FILM 0.68MF	5% 50V	CN0246	*1-564-506-11	PLUG, CONNECTOR 3P	
C3228	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	CN0248	*1-564-507-11	PLUG, CONNECTOR 4P	
C3229	1-137-368-11	FILM 0.0047MF	5% 50V	< DIODE >			
C3230	1-136-187-11	FILM 0.047MF	5% 63V	D1101	8-719-914-44	DIODE DAP202K	
C3231	1-124-911-11	ELECT 220MF	20% 50V	D1102	8-719-027-70	DIODE 1SV217-TPH3	
C3232	1-124-927-11	ELECT 4.7MF	20% 50V	D1103	8-719-820-71	DIODE 1SV214	
C3233	1-136-015-00	CERAMIC CHIP 0.0033MF	50V	D3201	8-719-110-14	DIODE RD9.1ESB3	
C3234	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	< FERRITE BEAD >			
C3235	1-163-036-00	CERAMIC CHIP 0.068MF	50V	FB1101	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
C3236	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	FB1102	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
C3237	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	FB1103	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
C3238	1-124-126-00	ELECT 47MF	20% 10V	FB1104	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
C3239	1-163-036-00	CERAMIC CHIP 0.068MF	50V	FB1105	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
C3240	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	< IC >			
C3241	1-163-018-00	CERAMIC CHIP 0.0056MF	10% 50V	IC1101	8-759-511-88	IC TDA8732	
C3242	1-163-018-00	CERAMIC CHIP 0.0056MF	10% 50V	IC1102	8-759-184-28	IC SAA7282-ZP	
C3243	1-163-038-00	CERAMIC CHIP 0.1MF	25V	IC1251	8-759-257-64	IC TDA7317	
C3244	1-124-477-11	ELECT 47MF	20% 16V	IC3201	8-759-267-99	IC M69032P	
C3245	1-163-237-11	CERAMIC CHIP 27PF	5% 50V	IC3202	8-759-300-71	IC HD14053BFP	
C3246	1-163-237-11	CERAMIC CHIP 27PF	5% 50V	IC3203	8-752-069-79	IC CXA1875M-T4	
C3247	1-163-038-00	CERAMIC CHIP 0.1MF	25V	IC3204	8-759-909-71	IC BA4558F	
C3248	1-124-477-11	ELECT 47MF	20% 16V	IC3205	8-759-266-65	IC TDA6622-5	
C3250	1-163-038-00	CERAMIC CHIP 0.1MF	25V	IC3206	8-759-633-83	IC M50198P	
C3251	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	< COIL >			
C3252	1-124-910-11	ELECT 47MF	20% 50V	L1101	1-408-405-00	INDUCTOR 4.7UH	
C3253	1-163-038-00	CERAMIC CHIP 0.1MF	25V	L1102	1-408-405-00	INDUCTOR 4.7UH	
C3255	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	L1103	1-410-119-11	INDUCTOR 1MMH	
C3256	1-163-038-00	CERAMIC CHIP 0.1MF	25V	L1104	1-410-119-11	INDUCTOR 1MMH	
C3257	1-137-437-11	FILM 0.0056MF	5% 50V	L1105	1-408-411-00	INDUCTOR 15UH (KV-A2942U)	
C3258	1-124-907-11	ELECT 10MF	20% 50V	L1251	1-408-421-00	INDUCTOR 100UH	
C3259	1-126-101-11	ELECT 100MF	20% 16V	L3201	1-408-421-00	INDUCTOR 100UH	
C3260	1-163-077-91	CERAMIC CHIP 0.1MF	50V	< TRANSISTOR >			
C3261	1-124-907-11	ELECT 10MF	20% 50V	Q1101	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C3263	1-124-907-11	ELECT 10MF	20% 50V				
C3264	1-124-907-11	ELECT 10MF	20% 50V				
C3265	1-124-907-11	ELECT 10MF	20% 50V				
C3266	1-124-907-11	ELECT 10MF	20% 50V				
C3267	1-130-772-00	FILM 0.22MF	5% 63V				

A3 (KV-A2943E)
(KV-A2942U)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1102	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1134	1-216-212-00	METAL GLAZE 3.9K 5%	1/8W
Q1103	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1135	1-216-081-00	METAL GLAZE 22K 5%	1/10W
Q1104	8-729-920-74	TRANSISTOR 2SC2412K-QR					
Q1105	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1136	1-216-081-00	METAL GLAZE 22K 5%	1/10W
				R1137	1-216-095-00	METAL GLAZE 82K 5%	1/10W
Q1106	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1138	1-216-097-00	METAL GLAZE 100K 5%	1/10W
Q1107	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1139	1-216-005-00	METAL GLAZE 15 5%	1/10W
Q1108	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1140	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
Q1251	8-729-920-74	TRANSISTOR 2SC2412K-QR					
Q1252	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1141	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
				R1142	1-216-033-00	METAL GLAZE 220 5%	1/10W
Q3203	8-729-216-22	TRANSISTOR 2SA1162-G		R1143	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q3205	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1144	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q3206	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1145	1-216-001-00	METAL GLAZE 10 5%	1/10W
Q3207	8-729-216-22	TRANSISTOR 2SA1162-G					
Q3208	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1146	1-216-049-00	METAL GLAZE 1K 5%	1/10W
				R1147	1-216-045-00	METAL GLAZE 680 5%	1/10W
Q3209	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1148	1-216-049-00	METAL GLAZE 1K 5%	1/10W
				R1149	1-216-001-00	METAL GLAZE 10 5%	1/10W
				R1150	1-216-045-00	METAL GLAZE 680 5%	1/10W
< RESISTOR >							
JR3201	1-216-295-91	METAL GLAZE 0 5%	1/10W	R1151	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR3202	1-216-295-91	METAL GLAZE 0 5%	1/10W	R1152	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR3203	1-216-295-91	METAL GLAZE 0 5%	1/10W	R1153	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR3204	1-216-295-91	METAL GLAZE 0 5%	1/10W	R1154	1-216-041-00	METAL GLAZE 470 5%	1/10W
JR3206	1-216-295-91	METAL GLAZE 0 5%	1/10W	R1251	1-216-089-91	METAL GLAZE 47K 5%	1/10W
JR3208	1-216-296-91	METAL GLAZE 0 5%	1/8W	R1252	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
JR3209	1-216-296-91	METAL GLAZE 0 5%	1/8W	R1253	1-216-089-91	METAL GLAZE 47K 5%	1/10W
JR3210	1-216-296-91	METAL GLAZE 0 5%	1/8W	R1254	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
JR3211	1-216-296-91	METAL GLAZE 0 5%	1/8W	R1255	1-216-089-91	METAL GLAZE 47K 5%	1/10W
JR3212	1-216-296-91	METAL GLAZE 0 5%	1/8W	R1256	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1101	1-216-188-00	METAL GLAZE 390 5%	1/8W	R1257	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1102	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R1258	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1103	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R1259	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1104	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1260	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1105	1-216-005-00	METAL GLAZE 15 5%	1/10W	R1261	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1106	1-216-185-11	METAL GLAZE 300 5%	1/8W	R1262	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1107	1-216-042-00	METAL GLAZE 510 5%	1/10W	R1263	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1108	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W	R1264	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1109	1-216-202-00	METAL GLAZE 1.5K 5%	1/8W	R1265	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1110	1-216-196-00	METAL GLAZE 820 5%	1/8W	R1266	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1111	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1267	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1112	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W	R1268	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1113	1-216-001-00	METAL GLAZE 10 5%	1/10W	R1269	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1114	1-216-105-00	METAL GLAZE 220K 5%	1/10W	R1270	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1115	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R1271	1-216-033-00	METAL GLAZE 220 5%	1/10W
R1116	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R1272	1-216-033-00	METAL GLAZE 220 5%	1/10W
R1117	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R3201	1-216-033-00	METAL GLAZE 220 5%	1/10W
R1118	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R3202	1-216-033-00	METAL GLAZE 220 5%	1/10W
R1119	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R3203	1-216-041-00	METAL GLAZE 470 5%	1/10W
R1120	1-216-232-00	METAL GLAZE 27K 5%	1/8W	R3204	1-216-041-00	METAL GLAZE 470 5%	1/10W
R1121	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R3205	1-216-070-00	METAL GLAZE 7.5K 5%	1/10W
R1122	1-216-158-00	METAL GLAZE 22 5%	1/8W	R3206	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1123	1-216-158-00	METAL GLAZE 22 5%	1/8W	R3207	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R1124	1-216-089-91	METAL GLAZE 47K 5%	1/10W	R3208	1-216-070-00	METAL GLAZE 7.5K 5%	1/10W
R1125	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R3209	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1126	1-216-218-00	METAL GLAZE 6.8K 5%	1/8W	R3210	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R1127	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R3211	1-216-294-00	METAL GLAZE 10M 5%	1/8W
R1128	1-216-089-91	METAL GLAZE 47K 5%	1/10W	R3212	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R1129	1-216-089-91	METAL GLAZE 47K 5%	1/10W	R3213	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R1130	1-216-246-91	METAL GLAZE 100K 5%	1/8W	R3214	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R1131	1-216-218-00	METAL GLAZE 6.8K 5%	1/8W	R3215	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R1132	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R3216	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R1133	1-216-089-91	METAL GLAZE 47K 5%	1/10W	R3217	1-216-097-00	METAL GLAZE 100K 5%	1/10W

A3 (KV-A2943E
KV-A2942U)

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R3218	1-216-198-91	METAL GLAZE 1K 5%	1/8W	R3293	1-216-025-00	METAL GLAZE 100 5%	1/10W
R3219	1-216-198-91	METAL GLAZE 1K 5%	1/8W	R3294	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R3220	1-216-699-11	METAL CHIP 100K 0.50%	1/10W	R3295	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R3221	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R3296	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R3222	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W	R3297	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R3223	1-216-109-00	METAL GLAZE 330K 5%	1/10W	R3298	1-247-807-31	CARBON 100 5%	1/4W
R3224	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R3299	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R3225	1-216-079-00	METAL GLAZE 18K 5%	1/10W	R3300	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R3226	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R3301	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R3227	1-216-220-00	METAL GLAZE 8.2K 5%	1/8W	R3302	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R3228	1-216-013-00	METAL GLAZE 33 5%	1/10W	R3303	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R3229	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W	R3304	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R3230	1-216-079-00	METAL GLAZE 18K 5%	1/10W	R3307	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R3231	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W	R3308	1-216-246-91	METAL GLAZE 100K 5%	1/8W
R3232	1-216-070-00	METAL GLAZE 7.5K 5%	1/10W	R3309	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R3233	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W	R3310	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R3234	1-216-097-00	METAL GLAZE 100K 5%	1/10W	< CRYSTAL >			
R3235	1-216-097-00	METAL GLAZE 100K 5%	1/10W	X1101	1-579-689-21	VIBRATOR, CRYSTAL	
R3236	1-216-097-00	METAL GLAZE 100K 5%	1/10W	X1102	1-579-282-21	VIBRATOR, CRYSTAL (KV-A2943E)	
R3237	1-216-295-91	METAL GLAZE 0 5%	1/10W		1-579-283-11	VIBRATOR, CRYSTAL (KV-A2942U)	
R3238	1-216-295-91	METAL GLAZE 0 5%	1/10W	X3201	1-567-505-11	OSCILLATOR, CRYSTAL	
R3239	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	*****			
R3240	1-216-296-91	METAL GLAZE 0 5%	1/8W	*A-1632-218-A	A BOARD, COMPLETE (KV-A2941A/A2941D/ ***** A2941K)		
R3241	1-216-121-00	METAL GLAZE 1M 5%	1/10W	*A-1632-222-A	A BOARD, COMPLETE (KV-A2941B) *****		
R3242	1-216-081-00	METAL GLAZE 22K 5%	1/10W	*A-1632-221-A	A BOARD, COMPLETE (KV-A2943E) *****		
R3243	1-216-081-00	METAL GLAZE 22K 5%	1/10W	*A-1632-192-A	A BOARD, COMPLETE (KV-A2942U) *****		
R3244	1-216-097-00	METAL GLAZE 100K 5%	1/10W	4-200-001-01	HOLDER, IC		
R3245	1-216-097-00	METAL GLAZE 100K 5%	1/10W	4-201-023-01	SPACER, INSULATING		
R3246	1-216-081-00	METAL GLAZE 22K 5%	1/10W	4-812-134-00	RIVET NYLON, 3.5		
R3247	1-216-109-00	METAL GLAZE 330K 5%	1/10W	< CAPACITOR >			
R3248	1-216-033-00	METAL GLAZE 220 5%	1/10W	C071	1-126-108-11	ELECT 56MF	20% 16V
R3249	1-216-033-00	METAL GLAZE 220 5%	1/10W	C072	1-124-120-11	ELECT 220MF	20% 16V
R3250	1-216-089-91	METAL GLAZE 47K 5%	1/10W	C074	1-163-001-11	CERAMIC CHIP 220PF	10% 50V
R3253	1-216-083-00	METAL GLAZE 27K 5%	1/10W	C102	1-126-103-11	ELECT 470MF	20% 16V
R3254	1-216-083-00	METAL GLAZE 27K 5%	1/10W	C103	1-163-031-11	CERAMIC CHIP 0.01MF	50V
R3255	1-216-089-91	METAL GLAZE 47K 5%	1/10W	C104	1-124-477-11	ELECT 47MF	20% 16V
R3256	1-216-083-00	METAL GLAZE 27K 5%	1/10W	C105	1-124-916-11	ELECT 22MF	20% 50V
R3257	1-216-083-00	METAL GLAZE 27K 5%	1/10W	C106	1-124-927-11	ELECT 4.7MF	20% 50V
R3258	1-216-089-91	METAL GLAZE 47K 5%	1/10W	C110	1-124-478-11	ELECT 100MF	20% 25V
R3259	1-216-097-00	METAL GLAZE 100K 5%	1/10W	C120	1-163-031-11	CERAMIC CHIP 0.01MF	50V
R3260	1-216-109-00	METAL GLAZE 330K 5%	1/10W	C201	1-130-489-00	FILM 0.033MF	5% 50V
R3261	1-216-097-00	METAL GLAZE 100K 5%	1/10W	C202	1-130-489-00	FILM 0.033MF	5% 50V
R3262	1-216-097-00	METAL GLAZE 100K 5%	1/10W	C203	1-164-005-11	CERAMIC CHIP 0.47MF	25V
R3263	1-216-081-00	METAL GLAZE 22K 5%	1/10W	C204	1-164-005-11	CERAMIC CHIP 0.47MF	25V
R3264	1-216-049-00	METAL GLAZE 1K 5%	1/10W	C205	1-124-907-11	ELECT 10MF	20% 50V
R3265	1-216-295-91	METAL GLAZE 0 5%	1/10W	C206	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
R3266	1-216-295-91	METAL GLAZE 0 5%	1/10W	C207	1-137-613-11	FILM 0.0018MF	2% 100V
R3267	1-216-097-00	METAL GLAZE 100K 5%	1/10W	C208	1-164-005-11	CERAMIC CHIP 0.47MF	25V
R3268	1-216-295-91	METAL GLAZE 0 5%	1/10W	C209	1-164-005-11	CERAMIC CHIP 0.47MF	25V
R3270	1-216-089-91	METAL GLAZE 47K 5%	1/10W	C210	1-164-005-11	CERAMIC CHIP 0.47MF	25V
R3271	1-216-295-91	METAL GLAZE 0 5%	1/10W	C213	1-163-023-00	CERAMIC CHIP 0.015MF	10% 50V
R3272	1-216-295-91	METAL GLAZE 0 5%	1/10W	C214	1-163-023-00	CERAMIC CHIP 0.015MF	10% 50V
R3275	1-216-295-91	METAL GLAZE 0 5%	1/10W	C215	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
R3277	1-216-295-91	METAL GLAZE 0 5%	1/10W				
R3278	1-216-238-91	METAL GLAZE 47K 5%	1/8W				
R3288	1-216-033-00	METAL GLAZE 220 5%	1/10W				
R3289	1-216-033-00	METAL GLAZE 220 5%	1/10W				
R3290	1-216-033-00	METAL GLAZE 220 5%	1/10W				
R3291	1-216-033-00	METAL GLAZE 220 5%	1/10W				
R3292	1-216-025-00	METAL GLAZE 100 5%	1/10W				

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REF.NO.	PART NO.	DESCRIPTION	REMARK
C216	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C217	1-124-925-11	ELECT 2.2MF	20% 50V
C218	1-124-925-11	ELECT 2.2MF	20% 50V
C219	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C220	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C221	1-124-925-11	ELECT 2.2MF	20% 50V
C222	1-124-925-11	ELECT 2.2MF	20% 50V
C223	1-136-177-00	FILM 1MF	5% 50V
C224	1-136-177-00	FILM 1MF	5% 50V
C225	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V
C226	1-163-007-11	CERAMIC CHIP 680PF	10% 50V
C227	1-124-907-11	ELECT 10MF	20% 50V
C228	1-124-907-11	ELECT 10MF	20% 50V
C229	1-124-478-11	ELECT 100MF	20% 25V
C230	1-124-478-11	ELECT 100MF	20% 25V
C231	1-164-346-11	CERAMIC CHIP 1MF	16V
C232	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C233	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C234	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C235	1-130-772-00	FILM 0.22MF	5% 63V
C236	1-124-618-11	ELECT 2200MF	20% 35V
C237	1-124-618-11	ELECT 2200MF	20% 35V
C238	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C239	1-130-772-00	FILM 0.22MF	5% 63V
C240	1-124-916-11	ELECT 22MF	20% 50V
C241	1-124-916-11	ELECT 22MF	20% 50V
C242	1-124-903-11	ELECT 1MF	20% 50V
C244	1-164-346-11	CERAMIC CHIP 1MF (KV-A2941A/A2941B/A2941D/A2943E/A2941K)	16V
	1-164-232-11	CERAMIC CHIP 0.01MF (KV-A2942U)	10% 50V
C248	1-163-185-00	CERAMIC CHIP 150PF	5% 50V
C249	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C251	1-124-282-00	ELECT 22MF	20% 16V
C254	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C255	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C256	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C257	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C299	1-164-337-11	CERAMIC CHIP 2.2MF (KV-A2941A/A2941D/A2943E/A2941K/A2942U)	16V
	1-164-346-11	CERAMIC CHIP 1MF (KV-A2941B)	16V
C301	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C302	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C303	1-164-337-11	CERAMIC CHIP 2.2MF	16V
C304	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C305	1-163-096-00	CERAMIC CHIP 13PF	5% 50V
C306	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C307	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C308	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C309	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C310	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C311	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C312	1-124-477-11	ELECT 47MF	20% 16V
C313	1-163-077-91	CERAMIC CHIP 0.1MF	50V
C314	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C315	1-124-477-11	ELECT 47MF	20% 16V
C316	1-163-077-91	CERAMIC CHIP 0.1MF	50V
C317	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C318	1-163-103-00	CERAMIC CHIP 27PF	5% 50V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C319	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C320	1-124-477-11	ELECT 47MF	20% 16V
C321	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C322	1-124-916-11	ELECT 22MF	20% 50V
C323	1-163-135-00	CERAMIC CHIP 560PF	5% 50V
C324	1-124-477-11	ELECT 47MF	20% 16V
C325	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C333	1-102-228-00	CERAMIC 470PF	10% 500V (KV-A2941B)
C341	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V
C342	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V
C343	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C344	1-162-638-11	CERAMIC CHIP 1MF	16V
C345	1-164-346-11	CERAMIC CHIP 1MF	16V
C346	1-124-916-11	ELECT 22MF	20% 50V
C347	1-162-638-11	CERAMIC CHIP 1MF	16V
C348	1-164-346-11	CERAMIC CHIP 1MF	16V
C349	1-164-346-11	CERAMIC CHIP 1MF	16V
C350	1-124-907-11	ELECT 10MF	20% 50V
C351	1-124-443-00	ELECT 100MF	20% 10V
C353	1-164-346-11	CERAMIC CHIP 1MF	16V
C354	1-164-346-11	CERAMIC CHIP 1MF	16V
C355	1-162-638-11	CERAMIC CHIP 1MF	16V
C356	1-164-489-11	CERAMIC CHIP 0.22MF	10% 16V
C357	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C358	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C359	1-124-907-11	ELECT 10MF	20% 50V
C360	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C361	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C362	1-130-772-00	FILM 0.22MF	5% 63V
C363	1-124-907-11	ELECT 10MF	20% 50V
C365	1-124-120-11	ELECT 220MF	20% 16V
C366	1-124-903-11	ELECT 1MF	20% 50V
C369	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C401	1-164-005-11	CERAMIC CHIP 0.47MF	16V
C402	1-104-792-51	ELECT 33MF	20% 16V
C403	1-162-637-11	CERAMIC CHIP 0.47MF	16V
C411	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C412	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C421	1-124-477-11	ELECT 47MF	20% 16V
C422	1-124-477-11	ELECT 47MF	20% 16V
C423	1-101-004-00	CERAMIC 0.01MF	50V
C424	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C425	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C426	1-124-477-11	ELECT 47MF	20% 16V
C427	1-164-346-11	CERAMIC CHIP 1MF	16V
C428	1-164-346-11	CERAMIC CHIP 1MF	16V
C429	1-124-119-00	ELECT 330MF	20% 16V
C574	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C575	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C576	1-163-075-00	CERAMIC CHIP 0.047MF	10% 25V
C581	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C582	1-124-916-11	ELECT 22MF	20% 50V
C583	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C585	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C586	1-163-063-00	CERAMIC CHIP 0.022MF	10% 50V
C587	1-124-903-11	ELECT 1MF	20% 50V
C588	1-164-346-11	CERAMIC CHIP 1MF	16V
C589	1-124-478-11	ELECT 100MF	20% 25V
C590	1-124-916-11	ELECT 22MF	20% 50V

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The components identified by shading and marked Δ are critical for safety.
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
C591	1-124-925-11	ELECT 2.2MF	20% 50V
C592	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C593	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V
C595	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C599	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C644	1-124-916-11	ELECT 22MF	20% 50V
C681	1-124-478-11	ELECT 100MF	20% 25V
C682	1-126-516-11	ELECT 120MF	20% 16V
C683	1-124-478-11	ELECT 100MF	20% 25V
C685	1-124-478-11	ELECT 100MF	20% 25V
C686	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C687	1-124-916-11	ELECT 22MF	20% 50V

< FILTER >

CF581 1-577-611-11 OSCILALTOR, CERAMIC

< CONNECTOR >

CN0001	*1-568-880-51	PIN, CONNECTOR 5P	
CN0101	1-695-297-11	CONNECTOR, BOARD TO BOARD 20P	
CN0103	1-564-511-11	PLUG, CONNECTOR 8P	
CN0104	1-564-511-11	PLUG, CONNECTOR 8P	
CN0105	*1-568-880-51	PIN, CONNECTOR 5P	
CN0106	*1-568-880-51	PIN, CONNECTOR 5P	
CN0107	*1-568-879-11	PIN, CONNECTOR 4P	
CN0108	*1-568-878-51	PIN, CONNECTOR 3P	
CN0109	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P	
CN0110	*1-568-879-11	PIN, CONNECTOR 4P	
CN0113	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P	
CN0119	*1-568-879-11	PIN, CONNECTOR 4P	
CN0127	*1-564-509-11	PLUG, CONNECTOR 6P	
CN0149	*1-568-879-11	PIN, CONNECTOR 4P	
CN5108	*1-564-513-11	PLUG, CONNECTOR 10P	

< DIODE >

D068	8-719-914-44	DIODE DAP202K	
D069	8-719-914-44	DIODE DAP202K	
D071	8-719-109-89	DIODE RD5.6ESB2	
D073	8-719-109-89	DIODE RD5.6ESB2	
D075	8-719-914-43	DIODE DAN202K	
D077	8-719-914-43	DIODE DAN202K	
D078	8-719-109-89	DIODE RD5.6ESB2	
D079	8-719-109-89	DIODE RD5.6ESB2	
D101	8-719-982-27	DIODE MTZJ-33C	
D206	8-719-914-43	DIODE DAN202K	
D207	8-719-921-89	DIODE MTZJ-13C	
D208	8-719-901-33	DIODE 1SS133	
D209	8-719-901-33	DIODE 1SS133	
D210	8-719-901-33	DIODE 1SS133	
D211	8-719-901-33	DIODE 1SS133	
D212	8-719-901-33	DIODE 1SS133	
D213	8-719-914-43	DIODE DAN202K	
D214	8-719-914-42	DIODE DA204K	
D215	8-719-914-42	DIODE DA204K (KV-A2941B)	
D216	8-719-914-42	DIODE DA204K (KV-A2941B)	
D301	8-719-914-43	DIODE DAN202K	
D304	8-719-109-89	DIODE RD5.6ESB2	
D305	8-719-914-43	DIODE DAN202K	
D306	8-719-914-43	DIODE DAN202K	
D307	8-719-914-43	DIODE DAN202K	
D308	8-719-914-42	DIODE DA204K	

REF.NO.	PART NO.	DESCRIPTION	REMARK
D311	8-719-914-42	DIODE DA204K	
D312	8-719-914-44	DIODE DAP202K	
D313	8-719-914-43	DIODE DAN202K	
D314	8-719-914-43	DIODE DAN202K	
D381	8-719-110-03	DIODE RD7.5ESB2	
D401	8-719-921-69	DIODE MTZJ-9.1	
D403	8-719-921-69	DIODE MTZJ-9.1	
D405	8-719-921-69	DIODE MTZJ-9.1	
D406	8-719-921-69	DIODE MTZJ-9.1	
D407	8-719-921-69	DIODE MTZJ-9.1	
D571	8-719-914-42	DIODE DA204K	
D681	8-719-921-75	DIODE MTZN-10B	
D683	8-719-914-44	DIODE DAP202K	

< IC >

IC072	8-759-184-27	IC ST24C16CB1	
IC201	8-759-266-64	IC TDA6612-5	
		(KV-A2941A/A2941B/A2941D/A2943E/A2941K)	
	8-759-266-65	IC TDA6622-5	(KV-A2942U)
IC202	8-759-502-21	IC TDA2822M	
IC251	8-759-072-99	IC TDA2052	
IC261	8-759-072-99	IC TDA2052	
IC301	8-759-189-90	IC TDA9145/N2B	
IC302	8-759-084-91	IC TDA4661/V2	
IC304	8-752-056-54	IC CXA1587S	
IC401	8-752-068-46	IC CXA1855S	
IC402	8-759-073-00	IC TEA2114	
IC681	8-759-072-98	IC TDA8138A	
	4-202-373-01	SPRING, IC (IC681)	
IC684	8-759-701-59	IC NJM78M09FA	
IC685	8-759-510-52	IC TEA7605	

< IF BLOCK >

IFB101	1-466-733-11	IF BLOCK (IFH-389)	(KV-A2941A/A2941D/A2943E/A2941K)
	1-466-735-11	IF BLOCK (IFH-389F)	(KV-A2941B)
	1-466-734-11	IF BLOCK (IFH-395)	(KV-A2942U)

< COIL >

L101	1-412-546-41	INDUCTOR	560UH
L102	1-408-413-00	INDUCTOR	22UH
L201	1-407-500-00	INDUCTOR	4.7MMH
L307	1-408-405-00	INDUCTOR	4.7UH
L309	1-408-411-00	INDUCTOR	15UH
L575	1-408-397-00	INDUCTOR	1UH
L611	1-412-539-41	INDUCTOR	150UH
L681	1-412-539-41	INDUCTOR	150UH

< IC LINK >

PS681	Δ 1-532-605-91	LINK, IC 0.4A (ICP-N10)	
PS682	Δ 1-532-605-91	LINK, IC 0.4A (ICP-N10)	

< TRANSISTOR >

Q071	8-729-901-05	TRANSISTOR DTA124EK	
Q101	8-729-216-22	TRANSISTOR 2SA1162-G	
Q102	8-729-901-00	TRANSISTOR DTC124EK	
Q103	8-729-900-53	TRANSISTOR DTC114EK	
Q201	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q202	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q203	8-729-920-74	TRANSISTOR 2SC2412K-QR	

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q204	8-729-216-22	TRANSISTOR 2SA1162-G		JR139	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q205	8-729-216-22	TRANSISTOR 2SA1162-G		JR140	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q206	8-729-216-22	TRANSISTOR 2SA1162-G		JR141	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q207	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR142	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q209	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR143	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q210	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR144	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q303	8-729-216-22	TRANSISTOR 2SA1162-G		JR151	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q304	8-729-900-53	TRANSISTOR DTC114EK		JR152	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q306	8-729-216-22	TRANSISTOR 2SA1162-G		JR153	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q308	8-729-216-22	TRANSISTOR 2SA1162-G		JR201	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q309	8-729-931-02	TRANSISTOR 2SC2413KQ		JR202	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q311	8-729-901-06	TRANSISTOR DTA144EK		JR203	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q312	8-729-900-53	TRANSISTOR DTC114EK		JR204	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q313	8-729-216-22	TRANSISTOR 2SA1162-G		JR205	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q314	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR206	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q315	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR207	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q317	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR208	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q401	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR209	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q402	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR210	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q403	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR211	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q581	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR212	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q582	8-729-216-22	TRANSISTOR 2SA1162-G		JR213	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q583	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR214	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q610	8-729-140-97	TRANSISTOR 2SB734-34		JR215	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q681	8-729-109-53	TRANSISTOR 2SD795A-P		JR216	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q682	8-729-900-53	TRANSISTOR DTC114EK		JR217	1-216-296-91	METAL GLAZE 0 5% 1/8W	
< RESISTOR >				JR218	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR102	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR219	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR104	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR220	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR105	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR221	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR107	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR222	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR110	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR223	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR111	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR224	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR112	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR225	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR113	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR226	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR114	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR227	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR115	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR228	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR116	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR230	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR117	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR231	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR118	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR232	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR119	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR233	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR120	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR234	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR121	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR235	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR122	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR236	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR123	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR237	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR125	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR238	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR126	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR240	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR127	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR241	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR128	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR242	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR129	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR243	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR130	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR245	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR131	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR247	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR132	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR248	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR133	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR250	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR134	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR251	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR135	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR252	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR136	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR253	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR137	1-216-295-91	METAL GLAZE 0 5% 1/10W		JR254	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR138	1-216-296-91	METAL GLAZE 0 5% 1/8W		JR255	1-216-296-91	METAL GLAZE 0 5% 1/8W	
				JR258	1-216-296-91	METAL GLAZE 0 5% 1/8W	

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
JR271	1-216-295-91	METAL GLAZE	0 5% 1/10W	R252	1-216-073-00	METAL GLAZE	10K 5% 1/10W
JR272	1-216-295-91	METAL GLAZE	0 5% 1/10W	R253	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R071	1-216-041-00	METAL GLAZE	470 5% 1/10W	R254	1-216-252-00	METAL GLAZE	180K 5% 1/8W
R072	1-216-033-00	METAL GLAZE	220 5% 1/10W	R255	1-216-252-00	METAL GLAZE	180K 5% 1/8W
R073	1-216-033-00	METAL GLAZE	220 5% 1/10W	R256	1-249-409-11	CARBON	220 5% 1/4W
R074	1-216-198-91	METAL GLAZE	1K 5% 1/8W	R257	1-249-409-11	CARBON	220 5% 1/4W
R076	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R258	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R077	1-216-025-00	METAL GLAZE	100 5% 1/10W	R259	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R101	1-216-025-00	METAL GLAZE	100 5% 1/10W	R260	1-216-212-00	METAL GLAZE	3.9K 5% 1/8W
R102	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R293	1-216-075-00	METAL GLAZE	12K 5% 1/10W (KV-A2941B)
R103	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R295	1-216-295-91	METAL GLAZE	0 5% 1/10W
R105	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R296	1-216-037-00	METAL GLAZE	330 5% 1/10W (KV-A2941B)
R108	1-216-230-00	METAL GLAZE	22K 5% 1/8W	R297	1-216-027-00	METAL GLAZE	120 5% 1/10W (KV-A2941B)
R115	1-216-210-00	METAL GLAZE	3.3K 5% 1/8W	R301	1-216-041-00	METAL GLAZE	470 5% 1/10W
R201	1-216-653-11	METAL CHIP	1.2K 0.50% 1/10W	R302	1-216-041-00	METAL GLAZE	470 5% 1/10W
R202	1-216-653-11	METAL CHIP	1.2K 0.50% 1/10W	R303	1-216-174-00	METAL GLAZE	100 5% 1/8W
R203	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R304	1-216-174-00	METAL GLAZE	100 5% 1/8W
R204	1-216-091-00	METAL GLAZE	56K 5% 1/10W	R305	1-216-035-00	METAL GLAZE	270 5% 1/10W
R205	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R306	1-216-035-00	METAL GLAZE	270 5% 1/10W
R206	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R307	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R207	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R308	1-216-121-00	METAL GLAZE	1M 5% 1/10W
R208	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R309	1-216-001-00	METAL GLAZE	10 5% 1/10W
R209	1-249-377-11	CARBON	0.47 5% 1/4W F	R310	1-216-001-00	METAL GLAZE	10 5% 1/10W
R210	1-247-734-11	CARBON	39 5% 1/2W	R311	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R211	1-247-734-11	CARBON	39 5% 1/2W	R312	1-249-413-11	CARBON	470 5% 1/4W
R212	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R313	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R213	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R314	1-249-409-11	CARBON	220 5% 1/4W
R214	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R315	1-249-409-11	CARBON	220 5% 1/4W
R215	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R316	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R216	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R318	1-216-041-00	METAL GLAZE	470 5% 1/10W
R217	1-216-045-00	METAL GLAZE	680 5% 1/10W	R319	1-249-413-11	CARBON	470 5% 1/4W
R218	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R322	1-216-041-00	METAL GLAZE	470 5% 1/10W
R221	1-212-849-00	FUSIBLE	4.7 5% 1/4W F	R324	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R222	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R325	1-216-041-00	METAL GLAZE	470 5% 1/10W
R223	1-216-045-00	METAL GLAZE	680 5% 1/10W	R326	1-216-295-91	METAL GLAZE	0 5% 1/10W (KV-A2941B)
R224	1-249-433-11	CARBON	22K 5% 1/4W	R328	1-216-025-00	METAL GLAZE	100 5% 1/10W
R225	1-212-849-00	FUSIBLE	4.7 5% 1/4W F	R329	1-216-023-00	METAL GLAZE	82 5% 1/10W
R226	1-249-412-11	CARBON	390 5% 1/4W	R330	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R227	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R331	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R228	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R333	1-216-182-00	METAL GLAZE	220 5% 1/8W
R229	1-216-039-00	METAL GLAZE	390 5% 1/10W	R334	1-216-182-00	METAL GLAZE	220 5% 1/8W
R230	1-216-246-91	METAL GLAZE	100K 5% 1/8W	R336	1-216-029-00	METAL GLAZE	150 5% 1/10W
R231	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R337	1-216-041-00	METAL GLAZE	470 5% 1/10W
R232	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R338	1-216-035-00	METAL GLAZE	270 5% 1/10W
R233	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R339	1-216-025-00	METAL GLAZE	100 5% 1/10W
R234	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R340	1-216-025-00	METAL GLAZE	100 5% 1/10W
R235	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R341	1-216-025-00	METAL GLAZE	100 5% 1/10W
R236	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R342	1-216-033-00	METAL GLAZE	220 5% 1/10W
R237	1-216-025-00	METAL GLAZE	100 5% 1/10W	R343	1-216-022-00	METAL GLAZE	75 5% 1/10W
R238	1-216-025-00	METAL GLAZE	100 5% 1/10W	R344	1-216-022-00	METAL GLAZE	75 5% 1/10W
R241	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R345	1-216-171-00	METAL GLAZE	75 5% 1/8W
R242	1-216-214-00	METAL GLAZE	4.7K 5% 1/8W	R346	1-216-022-00	METAL GLAZE	75 5% 1/10W
R244	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R347	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R245	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R351	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R246	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R352	1-216-033-00	METAL GLAZE	220 5% 1/10W
R247	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R354	1-216-033-00	METAL GLAZE	220 5% 1/10W
R248	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R355	1-216-033-00	METAL GLAZE	220 5% 1/10W
R249	1-216-045-00	METAL GLAZE	680 5% 1/10W				
R250	1-216-095-00	METAL GLAZE	82K 5% 1/10W				
R251	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				

A

IF (KV-A2941A/A2941D)
(KV-A2943E/A2941K)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R356	1-216-033-00	METAL GLAZE	220 5% 1/10W	R588	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
R357	1-216-041-00	METAL GLAZE	470 5% 1/10W	R589	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R358	1-216-031-00	METAL GLAZE	180 5% 1/10W	R590	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R359	1-216-033-00	METAL GLAZE	220 5% 1/10W	R591	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R360	1-216-033-00	METAL GLAZE	220 5% 1/10W	R592	1-216-232-00	METAL GLAZE 27K 5% 1/8W	
R361	1-216-033-00	METAL GLAZE	220 5% 1/10W	R593	1-216-673-11	METAL CHIP 8.2K 0.50% 1/10W	
R362	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R594	1-216-663-11	METAL CHIP 3.3K 0.50% 1/10W	
R366	1-216-236-11	METAL GLAZE	39K 5% 1/8W	R595	1-216-643-11	METAL CHIP 470 0.50% 1/10W	
R376	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R596	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R377	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R597	1-216-230-00	METAL GLAZE 22K 5% 1/8W	
R378	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R598	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R379	1-216-206-00	METAL GLAZE	2.2K 5% 1/8W	R600	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R380	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R616	1-216-184-00	METAL GLAZE 270 5% 1/8W	
R381	1-216-164-00	METAL GLAZE	39 5% 1/8W	R619	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R382	1-216-164-00	METAL GLAZE	39 5% 1/8W	R628	1-249-413-11	CARBON 470 5% 1/4W	
R383	1-216-164-00	METAL GLAZE	39 5% 1/8W	R632	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R385	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R681	1-216-541-00	METAL OXIDE 4.3 5% 3W F	
R386	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R682	1-249-415-11	CARBON 680 5% 1/4W	
R387	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R683	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R388	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2219	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R389	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R2220	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R390	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R2221	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R391	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R2222	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R392	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	< TUNER >			
R393	1-216-073-00	METAL GLAZE	10K 5% 1/10W	TU101	1-693-185-11	TUNER (UV916H)	
R394	1-216-081-00	METAL GLAZE	22K 5% 1/10W		(KV-A2941A/A2941B/A2941D/A2943E/A2941K)		
R395	1-216-091-00	METAL GLAZE	56K 5% 1/10W		1-693-184-11	TUNER (U944C) (KV-A2942U)	
R396	1-216-081-00	METAL GLAZE	22K 5% 1/10W	< CRYSTAL >			
R401	1-216-171-00	METAL GLAZE	75 5% 1/8W	X301	1-567-504-11	OSCILLATOR, CRYSTAL	
R402	1-216-158-00	METAL GLAZE	22 5% 1/8W	X302	1-567-505-11	OSCILLATOR, CRYSTAL	
R403	1-216-025-00	METAL GLAZE	100 5% 1/10W	*****			
R404	1-216-158-00	METAL GLAZE	22 5% 1/8W		1-466-733-11	IF BLOCK (IFH-389) (KV-A2941A/A2941D/ A2943E/A2941K)	
R405	1-216-025-00	METAL GLAZE	100 5% 1/10W	< CAPACITOR >			
R406	1-216-158-00	METAL GLAZE	22 5% 1/8W	C101	1-163-121-00	CERAMIC CHIP 150PF 5% 50V	
R407	1-216-025-00	METAL GLAZE	100 5% 1/10W	C102	1-164-222-11	CERAMIC CHIP 0.22MF 25V	
R408	1-216-093-00	METAL GLAZE	68K 5% 1/10W	C103	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
R410	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	C104	1-164-232-11	CERAMIC CHIP 0.01F 10% 50V	
R411	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	C105	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
R412	1-216-022-00	METAL GLAZE	75 5% 1/10W	C106	1-124-477-11	ELECT 47MF 20% 16V	
R413	1-216-022-00	METAL GLAZE	75 5% 1/10W	C107	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
R414	1-216-022-00	METAL GLAZE	75 5% 1/10W	C108	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
R416	1-216-113-00	METAL GLAZE	470K 5% 1/10W	C109	1-164-232-11	CERAMIC CHIP 0.01F 10% 50V	
R417	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	C112	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
R419	1-216-113-00	METAL GLAZE	470K 5% 1/10W	C113	1-164-101-00	CERAMIC CHIP 22PF 5% 50V	
R420	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	C114	1-124-477-11	ELECT 47MF 20% 16V	
R424	1-216-025-00	METAL GLAZE	100 5% 1/10W	C115	1-164-232-11	CERAMIC CHIP 0.01F 10% 50V	
R425	1-216-025-00	METAL GLAZE	100 5% 1/10W	C116	1-164-346-11	CERAMIC CHIP 1MF 16V	
R428	1-249-393-11	CARBON	10 5% 1/4W F	C118	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
R574	1-216-041-00	METAL GLAZE	470 5% 1/10W	C119	1-163-369-11	CERAMIC CHIP 47PFF 5% 25V	
R575	1-216-186-00	METAL GLAZE	330 5% 1/8W	C121	1-163-235-11	CERAMOC CHIP 22PF 5% 50V	
R577	1-216-089-91	METAL GLAZE	47K 5% 1/10W	C122	1-164-239-11	CERAMIC CHIP 33PF 5% 50V	
R578	1-216-238-91	METAL GLAZE	47K 5% 1/8W	C123	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
R580	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C124	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
R581	1-216-033-00	METAL GLAZE	220 5% 1/10W				
R582	1-216-037-00	METAL GLAZE	330 5% 1/10W				
R583	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W				
R584	1-216-039-00	METAL GLAZE	390 5% 1/10W				
R585	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W				
R586	1-216-047-00	METAL GLAZE	820 5% 1/10W				
R587	1-216-047-00	METAL GLAZE	820 5% 1/10W	C130	1-216-295-00	METAL GLAZE 0 5% 1/10W	

IF (KV-A2941A/A2941D
KV-A2943E/A2941K)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C131	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	Q173	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C133	1-124-477-11	ELECT 47MF	20% 16V			< RESISTOR >	
C152	1-164-337-11	CERAMIC CHIP 2.2MF	16V				
C153	1-164-337-11	CERAMIC CHIP 2.2MF	16V	JR2	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C154	1-164-337-11	CERAMIC CHIP 2.2MF	16V	JR3	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C155	1-164-232-11	CERAMIC CHIP 0.01F	10% 50V	JR4	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C156	1-124-477-11	ELECT 47MF	20% 16V	JR7	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C161	1-164-117-00	CERAMIC CHIP 100PF	5% 50V	JR8	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C162	1-164-222-11	CERAMIC CHIP 0.22MF	25V	JR9	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C163	1-164-346-11	CERAMIC CHIP 1MF	16V	JR11	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C164	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	JR14	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C165	1-164-232-11	CERAMIC CHIP 0.01F	10% 50V	JR16	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C166	1-124-477-11	ELECT 47MF	20% 16V	JR18	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C167	1-163-213-00	CERAMIC CHIP 0.0022MF	5% 50V	JR19	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C168	1-164-346-11	CERAMIC CHIP 1MF	16V	JR20	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C170	1-124-477-11	ELECT 47MF	20% 16V	JR21	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C171	1-124-477-11	ELECT 47MF	20% 16V	JR23	1-216-296-00	METAL GLAZE 0 5% 1/8W	
C173	1-124-477-11	ELECT 47MF	20% 16V	JR24	1-216-296-00	METAL GLAZE 0 5% 1/8W	
		< FILTER >		JR25	1-216-296-00	METAL GLAZE 0 5% 1/8W	
CF2	1-527-839-00	FILTER, CERAMIC		JR29	1-216-296-00	METAL GLAZE 0 5% 1/8W	
CF3	1-527-840-00	FILTER, CERAMIC		JR30	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CF4	1-567-570-00	FILTER, CERAMIC		JR33	1-216-295-00	METAL GLAZE 0 5% 1/10W	
SWF1	1-579-658-11	FILTER, SAWTOOTH WAVE		JR38	1-216-296-00	METAL GLAZE 0 5% 1/8W	
		< CONNECTOR >		JR39	1-216-296-00	METAL GLAZE 0 5% 1/8W	
CN1	1-750-173-11	PIN, CONNECTOR (PC BOARD) 10P		JR40	1-216-296-00	METAL GLAZE 0 5% 1/8	
CN2	1-750-173-11	PIN, CONNECTOR (PC BOARD) 10P		R101	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
		< TRIMMER >		R102	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
CT1	1-404-801-11	TRAP, CERAMIC		R103	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
		< DIODE >		R104	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
D161	8-719-400-18	DIODE MA152WK		R106	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
		< IC >		R107	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
IC1	8-759-070-76	IC M52308SP		R108	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
IC2	8-759-070-71	IC TDA9820		R110	1-216-041-00	METAL GLAZE 470 5% 1/10W	
IC3	8-759-514-54	IC BA7046		R113	1-216-031-00	METAL GLAZE 180 5% 1/10W	
		< COIL >		R114	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
L101	1-408-421-00	INDUCTOR 100UH		R115	1-216-027-00	METAL GLAZE 120 5% 1/10W	
L102	1-408-419-00	INDUCTOR 68UH		R116	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
L103	1-408-419-00	INDUCTOR 68UH		R117	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
L104	1-408-408-00	INDUCTOR 8.2UH		R118	1-216-117-00	METAL GLAZE 680K 5% 1/10W	
L121	1-408-413-00	INDUCTOR 22UH		R119	1-216-240-00	METAL GLAZE 56K 5% 1/8W	
L122	1-408-420-00	INDUCTOR 82UH		R120	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
L142	1-408-790-00	INDUCTOR 0.56UH		R121	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
L151	1-408-419-00	INDUCTOR 68UH		R122	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
L161	1-408-419-00	INDUCTOR 68UH		R123	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
		< TRANSISTOR >		R124	1-216-041-00	METAL GLAZE 470 5% 1/10W	
Q101	8-729-920-74	TRANSISTOR 2SC2412K-QR		R125	1-216-041-00	METAL GLAZE 470 5% 1/10W	
Q102	8-729-216-22	TRANSISTOR 2SA1162-G		R127	1-216-047-00	METAL GLAZE 820 5% 1/10W	
Q121	8-729-920-74	TRANSISTOR 2SC2412K-QR		R130	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q122	8-729-216-22	TRANSISTOR 2SA1162-G		R131	1-216-025-00	METAL GLAZE 100 5% 1/10W	
Q161	8-729-216-22	TRANSISTOR 2SA1162-G		R132	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
Q170	8-729-920-74	TRANSISTOR 2SC2412K-QR		R133	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
Q171	8-729-920-74	TRANSISTOR 2SC2412K-QR		R134	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q172	8-729-920-74	TRANSISTOR 2SC2412K-QR		R135	1-216-198-00	METAL GLAZE 1K 5% 1/8W	
				R150	1-216-043-00	METAL GLAZE 560 5% 1/10W	
				R151	1-216-043-00	METAL GLAZE 560 5% 1/10W	
				R152	1-216-043-00	METAL GLAZE 560 5% 1/10W	
				R153	1-216-025-00	METAL GLAZE 100 5% 1/10W	
				R154	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
				R155	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
				R156	1-216-083-00	METAL GLAZE 27K 5% 1/10W	

IF (KV-A2941A/A2941D
KV-A2943E/A2941K)

IF (KV-A2941B)

REF.NO.	PART NO.	DESCRIPTION	REMARK
R157	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R159	1-216-107-00	METAL GLAZE 270K 5%	1/10W
R160	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R161	1-216-755-11	METAL CHIP 130K 0.50%	1/10W
R162	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R163	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R164	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R165	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R166	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R167	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R168	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R169	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R170	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R171	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R172	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R173	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R174	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R175	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R176	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R177	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R178	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R179	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R180	1-216-037-00	METAL GLAZE 330 5%	1/10W
R181	1-216-037-00	METAL GLAZE 330 5%	1/10W

< VARIABLE RESISTOR >

RV1 1-241-121-11 RES, ADJ, CARBON 4.7K

< TRANSFORMER >

T4 1-416-017-21 COIL
T5 1-416-018-21 COIL

1-466-735-11 IF BLOCK (IFH-389F) (KV-A2941B)

< CAPACITOR >

C1	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C2	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C3	1-124-903-11	ELECT 1MF	20% 50V
C4	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C5	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C6	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C7	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C8	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C9	1-124-916-11	ELECT 22MF	20% 25V
C10	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C11	1-124-477-11	ELECT 47MF	20% 16V
C13	1-163-059-00	CERAMIC CHIP 0.01MF	10% 50V
C14	1-124-477-11	ELECT 47MF	20% 16V
C15	1-124-903-11	ELECT 1MF	20% 50V
C16	1-163-061-00	CERAMIC CHIP 0.015MF	10% 50V
C17	1-162-638-11	CERAMIC CHIP 1MF	16V
C18	1-162-638-11	CERAMIC CHIP 1MF	16V
C19	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C20	1-124-902-00	ELECT 0.47MF	20% 50V
C21	1-124-903-11	ELECT 1MF	20% 50V
C22	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C23	1-124-902-00	ELECT 0.47MF	20% 50V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C24	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C25	1-124-477-11	ELECT 47MF	20% 16V
C26	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C27	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C28	1-124-477-11	ELECT 47MF	20% 16V
C33	1-124-907-11	ELECT 10MF	20% 50V
C34	1-124-907-11	ELECT 10MF	20% 50V
C35	1-124-925-11	ELECT 2.2MF	20% 50V
C36	1-124-477-11	ELECT 47MF	20% 16V
C37	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C38	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C40	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C71	1-124-477-11	ELECT 47MF	20% 16V
C72	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C80	1-124-477-11	ELECT 47MF	20% 16V
C83	1-124-477-11	ELECT 47MF	20% 16V
C84	1-124-477-11	ELECT 47MF	20% 16V
C85	1-124-477-11	ELECT 47MF	20% 16V
C86	1-124-477-11	ELECT 47MF	20% 16V
C87	1-124-477-11	ELECT 47MF	20% 16V
C91	1-163-229-11	CERAMIC CHIP 12PF	5% 50V
C95	1-164-337-11	CERAMIC CHIP 2.2MF	16V
C101	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C102	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C104	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C105	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C106	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C119	1-163-369-11	CERAMIC CHIP 47PFF	5% 25V
C121	1-126-176-11	ELECT 220MF	20% 10V
C122	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C131	1-126-099-11	ELECT 2.2MF	20% 35V

< FILTER >

CF1	1-527-839-00	FILTER, CERAMIC
CF2	1-567-569-11	FILTER, CERAMIC
CF3	1-527-840-00	FILTER, CERAMIC
CF4	1-567-570-11	FILTER, CERAMIC

SWF1	1-579-662-11	FILTER, SURFACE WAVE
SWF3	1-404-711-11	SAWF
SWF4	1-579-660-11	FILTER, SAWTOOTH WAVE

< CONNECTOR >

CN1	1-750-173-11	PIN, CONNECTOR (PC BOARD) 10P
CN2	1-750-173-11	PIN, CONNECTOR (PC BOARD) 10P

< TRIMMER >

CT1	1-404-801-11	TRAP, CERAMIC
CT2	1-409-429-11	TRAP, CERAMIC
CV1	1-141-245-00	CAP, TRIMMER
CV1	1-141-245-00	CAP, TRIMMER
CV3	1-141-304-21	TRIMMER, CERAMIC

< DIODE >

D7	8-719-421-57	DIODE MA73-TX
D8	8-719-421-57	DIODE MA73-TX
D9	8-719-421-57	DIODE MA73-TX

< IC >

IC1	8-759-070-75	IC M52312SP
IC2	8-759-070-71	IC TDA9820

IF (KV-A2941B)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
IC3	8-759-979-62	IC PCF8574		R39	1-216-089-00	METAL GLAZE 47K 5%	1/10W
< COIL >				R40	1-216-049-00	METAL GLAZE 1K 5%	1/10W
L1	1-408-419-00	INDUCTOR 68UH		R42	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
L2	1-408-419-00	INDUCTOR 68UH		R43	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
L3	1-408-407-00	INDUCTOR 6.8UH		R44	1-216-027-00	METAL GLAZE 120 5%	1/10W
L4	1-408-419-00	INDUCTOR 68UH		R45	1-216-041-00	METAL GLAZE 470 5%	1/10W
L5	1-408-419-00	INDUCTOR 68UH		R46	1-216-031-00	METAL GLAZE 180 5%	1/10W
L7	1-408-406-00	INDUCTOR 5.6UH		R47	1-216-075-00	METAL GLAZE 12K 5%	1/10W
L9	1-408-419-00	INDUCTOR 68UH		R48	1-216-081-00	METAL GLAZE 22K 5%	1/10W
L71	1-408-419-00	INDUCTOR 68UH		R49	1-216-049-00	METAL GLAZE 1K 5%	1/10W
L101	1-408-399-00	INDUCTOR 1.5UH		R53	1-216-082-00	METAL GLAZE 24K 5%	1/10W
L121	1-408-407-00	INDUCTOR 6.8UH		R54	1-216-043-00	METAL GLAZE 560 5%	1/10W
< TRANSISTOR >				R55	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q1	8-729-907-06	TRANSISTOR BF199-AMMO		R56	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
Q4	8-729-920-74	TRANSISTOR 2SC2412K-QR		R57	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
Q5	8-729-115-10	TRANSISTOR 2SK105A-10		R58	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q6	8-729-900-52	TRANSISTOR DTC114YK		R59	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q7	8-729-216-22	TRANSISTOR 2SA1162-G		R60	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q8	8-729-920-74	TRANSISTOR 2SC2412K-QR		R61	1-216-295-00	METAL GLAZE 0 5%	1/10W
Q10	8-729-920-74	TRANSISTOR 2SC2412K-QR		R63	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q11	8-729-920-74	TRANSISTOR 2SC2412K-QR		R71	1-216-079-00	METAL GLAZE 18K 5%	1/10W
Q12	8-729-920-74	TRANSISTOR 2SC2412K-QR		R72	1-216-079-00	METAL GLAZE 18K 5%	1/10W
Q13	8-729-920-74	TRANSISTOR 2SC2412K-QR		R73	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q14	8-729-920-74	TRANSISTOR 2SC2412K-QR		R74	1-216-079-00	METAL GLAZE 18K 5%	1/10W
Q15	8-729-920-74	TRANSISTOR 2SC2412K-QR		R75	1-216-079-00	METAL GLAZE 18K 5%	1/10W
Q16	8-729-216-22	TRANSISTOR 2SA1162-G		R76	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q101	8-729-104-80	TRANSISTOR 2SC3355		R77	1-216-174-00	METAL GLAZE 100 5%	1/8W
Q121	8-729-920-74	TRANSISTOR 2SC2412K-QR		R81	1-216-095-00	METAL GLAZE 82K 5%	1/10W
< RESISTOR >				R82	1-216-121-00	METAL GLAZE 1M 5%	1/10W
JR2	1-216-295-00	METAL GLAZE 0 5%	1/10W	R83	1-216-025-00	METAL GLAZE 100 5%	1/10W
JR3	1-216-296-00	METAL GLAZE 0 5%	1/8W	R84	1-216-085-00	METAL GLAZE 33K 5%	1/10W
JR5	1-216-296-00	METAL GLAZE 0 5%	1/8W	R85	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R1	1-216-025-00	METAL GLAZE 100 5%	1/10W	R86	1-216-689-00	METAL GLAZE 39K 5%	1/10W
R2	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R87	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R3	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R88	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R4	1-216-041-00	METAL GLAZE 470 5%	1/10W	R89	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R5	1-216-021-00	METAL GLAZE 68 5%	1/10W	R90	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R6	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W	R91	1-216-295-00	METAL GLAZE 0 5%	1/10W
R8	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W	R92	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R9	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W	R93	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R10	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W	R94	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R11	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R95	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R24	1-216-280-00	METAL GLAZE 2.7M 5%	1/8W	R96	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R25	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R97	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R26	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R98	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R27	1-216-266-00	METAL GLAZE 680K 5%	1/8W	R99	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R28	1-216-075-00	METAL GLAZE 12K 5%	1/10W	R100	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R29	1-216-035-00	METAL GLAZE 270 5%	1/10W	R102	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R30	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R103	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R31	1-216-017-00	METAL GLAZE 47 5%	1/10W	R104	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R32	1-216-043-00	METAL GLAZE 560 5%	1/10W	R105	1-216-033-00	METAL GLAZE 220 5%	1/10W
R33	1-216-037-00	METAL GLAZE 330 5%	1/10W	R121	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R34	1-216-252-00	METAL GLAZE 180K 5%	1/8W	R122	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R35	1-216-035-00	METAL GLAZE 270 5%	1/10W	R123	1-216-041-00	METAL GLAZE 470 5%	1/10W
R36	1-216-029-00	METAL GLAZE 150 5%	1/10W	R124	1-216-041-00	METAL GLAZE 470 5%	1/10W
R37	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R125	1-216-041-00	METAL GLAZE 470 5%	1/10W
R38	1-216-099-00	METAL GLAZE 120K 5%	1/10W	R301	1-216-049-00	METAL GLAZE 1K 5%	1/10W
				R302	1-216-049-00	METAL GLAZE 1K 5%	1/10W
				R303	1-216-049-00	METAL GLAZE 1K 5%	1/10W
				R304	1-216-037-00	METAL GLAZE 330 5%	1/10W

IF (KV-A2941B)

IF (KV-A2942U)

REF.NO.	PART NO.	DESCRIPTION	REMARK
R305	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R306	1-216-025-00	METAL GLAZE 100 5%	1/10W
R307	1-216-037-00	METAL GLAZE 330 5%	1/10W
R308	1-216-037-00	METAL GLAZE 330 5%	1/10W
< VARIABLE RESISTOR >			
RV2	1-241-120-11	RES, ADJ, CARBON 2.2K	
< TRANSFORMER >			
T1	1-404-806-21	COIL	
T3	1-416-012-11	COIL	
T4	1-416-012-11	COIL	
T5	1-402-720-11	COIL	
< CRYSTAL >			
X1	1-579-648-21	VIBRATOR, CERAMIC	

	1-466-734-11	IF BLOCK (IFH-395) (KV-A2942U)	

< CAPACITOR >			
C101	1-163-239-11	CERAMIC CHIP 33PF	5% 50V
C102	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C103	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C104	1-164-232-11	CERAMIC CHIP 0.01F	10% 50V
C105	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C106	1-124-477-11	ELECT 47MF	20% 16V
C107	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C108	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C109	1-164-232-11	CERAMIC CHIP 0.01F	10% 50V
C112	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C113	1-164-101-00	CERAMIC CHIP 22PF	5% 50V
C114	1-124-477-11	ELECT 47MF	20% 16V
C115	1-164-232-11	CERAMIC CHIP 0.01F	10% 50V
C116	1-164-346-11	CERAMIC CHIP 1MF	16V
C118	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C119	1-163-369-11	CERAMIC CHIP 47PFF	5% 25V
C122	1-163-093-11	CERAMIC CHIP 10PF	5% 50V
C130	1-216-295-00	METAL GLAZE 0	5% 1/10W
C131	1-163-224-11	CERAMIC CHIP 7PF	0.25PF 50V
C133	1-124-477-11	ELECT 47MF	20% 16V
C161	1-164-117-00	CERAMIC CHIP 100PF	5% 50V
C162	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C163	1-164-346-11	CERAMIC CHIP 1MF	16V
C164	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C165	1-164-232-11	CERAMIC CHIP 0.01F	10% 50V
C166	1-124-477-11	ELECT 47MF	20% 16V
C167	1-163-213-00	CERAMIC CHIP 0.0022MF	5% 50V
C168	1-164-346-11	CERAMIC CHIP 1MF	16V
C170	1-124-477-11	ELECT 47MF	20% 16V
C171	1-124-477-11	ELECT 47MF	20% 16V
C173	1-124-477-11	ELECT 47MF	20% 16V
< FILTER >			
CD1	1-579-657-21	DISCRIMINATOR, CERAMIC	
CF1	1-567-569-11	FILTER, CERAMIC	
SWF1	1-579-659-11	FILTER, SAWTOOTH WAVE	

REF.NO.	PART NO.	DESCRIPTION	REMARK
< CONNECTOR >			
CN1	1-750-173-11	PIN, CONNECTOR (PC BOARD) 10P	
CN2	1-750-173-11	PIN, CONNECTOR (PC BOARD) 10P	
< TRIMMER >			
CT1	1-409-333-00	TRAP, CERAMIC (6.0MHZ)	
< DIODE >			
D161	8-719-400-18	DIODE MA152WK	
< IC >			
IC1	8-759-070-76	IC M52308SP	
IC3	8-759-514-54	IC BA7046	
< COIL >			
L101	1-408-414-00	INDUCTOR 27UH	
L102	1-408-419-00	INDUCTOR 68UH	
L103	1-408-419-00	INDUCTOR 68UH	
L104	1-408-406-00	INDUCTOR 5.6UH	
L105	1-408-410-00	INDUCTOR 12UH	
L142	1-408-790-41	INDUCTOR 0.56UH	
L161	1-408-419-00	INDUCTOR 68UH	
< TRANSISTOR >			
Q101	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q102	8-729-216-22	TRANSISTOR 2SA1162-G	
Q122	8-729-216-22	TRANSISTOR 2SA1162-G	
Q161	8-729-216-22	TRANSISTOR 2SA1162-G	
Q172	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q173	8-729-920-74	TRANSISTOR 2SC2412K-QR	
< RESISTOR >			
JR1	1-216-296-00	METAL GLAZE 0 5%	1/W
JR2	1-216-295-00	METAL GLAZE 0 5%	1/OW
JR3	1-216-296-00	METAL GLAZE 0 5%	1/W
JR4	1-216-295-00	METAL GLAZE 0 5%	1/OW
JR7	1-216-295-00	METAL GLAZE 0 5%	1/OW
JR8	1-216-295-00	METAL GLAZE 0 5%	1/OW
JR9	1-216-296-00	METAL GLAZE 0 5%	1/W
JR10	1-216-296-00	METAL GLAZE 0 5%	1/W
JR11	1-216-296-00	METAL GLAZE 0 5%	1/W
JR12	1-216-296-00	METAL GLAZE 0 5%	1/W
JR13	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
JR14	1-216-296-00	METAL GLAZE 0 5%	1/W
JR16	1-216-295-00	METAL GLAZE 0 5%	1/OW
JR18	1-216-295-00	METAL GLAZE 0 5%	1/OW
JR19	1-216-296-00	METAL GLAZE 0 5%	1/W
JR20	1-216-296-00	METAL GLAZE 0 5%	1/W
JR21	1-216-296-00	METAL GLAZE 0 5%	1/W
JR23	1-216-296-00	METAL GLAZE 0 5%	1/W
JR24	1-216-296-00	METAL GLAZE 0 5%	1/W
JR25	1-216-296-00	METAL GLAZE 0 5%	1/W
JR29	1-216-296-00	METAL GLAZE 0 5%	1/W
JR30	1-216-295-00	METAL GLAZE 0 5%	1/OW
JR33	1-216-295-00	METAL GLAZE 0 5%	1/OW
JR38	1-216-296-00	METAL GLAZE 0 5%	1/W
JR39	1-216-296-00	METAL GLAZE 0 5%	1/W

IF (KV-A2942U)

M2

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
JR40	1-216-296-00	METAL GLAZE	0 5% 1/8W	*A-1635-023-A M2 BOARD, COMPLETE			
JR41	1-216-295-00	METAL GLAZE	0 5% 1/10W	*****			
JR42	1-216-295-00	METAL GLAZE	0 5% 1/10W	< CAPACITOR >			
JR101	1-216-295-00	METAL GLAZE	0 5% 1/10W	C001	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R101	1-216-075-00	METAL GLAZE	12K 5% 1/10W	C004	1-164-222-11	CERAMIC CHIP 0.22MF	25V
R102	1-216-045-00	METAL GLAZE	680 5% 1/10W	C007	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R103	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	C008	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R104	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	C010	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R105	1-216-043-00	METAL GLAZE	560 5% 1/10W	C011	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R106	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C012	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R107	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	C014	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R108	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	C016	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
R110	1-216-041-00	METAL GLAZE	470 5% 1/10W	C017	1-164-222-11	CERAMIC CHIP 0.22MF	25V
R112	1-216-045-00	METAL GLAZE	680 5% 1/10W	C018	1-164-505-11	CERAMIC CHIP 2.2MF	16V
R113	1-216-031-00	METAL GLAZE	180 5% 1/10W	C019	1-124-916-11	ELECT 22MF	20% 50V
R114	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C020	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R115	1-216-031-00	METAL GLAZE	180 5% 1/10W	C022	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
R116	1-216-101-00	METAL GLAZE	150K 5% 1/10W	C023	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
R117	1-216-097-00	METAL GLAZE	100K 5% 1/10W	C024	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
R118	1-216-117-00	METAL GLAZE	680K 5% 1/10W	C025	1-164-222-11	CERAMIC CHIP 0.22MF	25V
R119	1-216-240-00	METAL GLAZE	56K 5% 1/8W	C026	1-164-222-11	CERAMIC CHIP 0.22MF	25V
R120	1-216-075-00	METAL GLAZE	12K 5% 1/10W	C032	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R121	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	C035	1-163-033-00	CERAMIC CHIP 0.022MF	50V
R122	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	C036	1-164-005-11	CERAMIC CHIP 0.47MF	25V
R123	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	C037	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R130	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C039	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
R131	1-216-025-00	METAL GLAZE	100 5% 1/10W	C042	1-162-638-11	CERAMIC CHIP 1MF	16V
R132	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	C044	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R133	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	C522	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
R134	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C523	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
R135	1-216-198-00	METAL GLAZE	1K 5% 1/8W	C524	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
R153	1-216-025-00	METAL GLAZE	100 5% 1/10W	C525	1-164-222-11	CERAMIC CHIP 0.22MF	25V
R159	1-216-107-00	METAL GLAZE	270K 5% 1/10W	C528	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
R160	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C529	1-163-169-00	CERAMIC CHIP 33PF	5% 50V
R161	1-216-755-11	METAL CHIP	130K 0.50% 1/10W	C541	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
R162	1-216-073-00	METAL GLAZE	10K 5% 1/10W	C542	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
R163	1-216-113-00	METAL GLAZE	470K 5% 1/10W	C543	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
R164	1-216-113-00	METAL GLAZE	470K 5% 1/10W	C544	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
R165	1-216-081-00	METAL GLAZE	22K 5% 1/10W	C546	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
R166	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C547	1-163-020-00	CERAMIC CHIP 0.0082MF	10% 50V
R167	1-216-073-00	METAL GLAZE	10K 5% 1/10W	C549	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V
R168	1-216-113-00	METAL GLAZE	470K 5% 1/10W	C550	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
R169	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C559	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
R175	1-216-083-00	METAL GLAZE	27K 5% 1/10W	C560	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
R176	1-216-075-00	METAL GLAZE	12K 5% 1/10W	C563	1-163-031-11	CERAMIC CHIP 0.01MF	50V
R177	1-216-095-00	METAL GLAZE	82K 5% 1/10W	C564	1-163-031-11	CERAMIC CHIP 0.01MF	50V
R178	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	C565	1-163-031-11	CERAMIC CHIP 0.01MF	50V
R179	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	C566	1-163-031-11	CERAMIC CHIP 0.01MF	50V
R181	1-216-037-00	METAL GLAZE	330 5% 1/10W	C567	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
< VARIABLE RESISTOR >				C568	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
RV1	1-241-121-11	RES, ADJ, CARBON 4.7K		C569	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
< TRANSFORMER >				C570	1-162-568-11	CERAMIC CHIP 0.33MF	10% 16V
T4	1-416-017-21	COIL		C2001	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
T5	1-416-018-21	COIL		C2002	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
				C2004	1-164-222-11	CERAMIC CHIP 0.22MF	25V
				C2005	1-163-038-00	CERAMIC CHIP 0.1MF	25V
				C2008	1-164-222-11	CERAMIC CHIP 0.22MF	25V
				C2016	1-164-222-11	CERAMIC CHIP 0.22MF	25V
				C2017	1-164-222-11	CERAMIC CHIP 0.22MF	25V


M2

REF.NO.	PART NO.	DESCRIPTION	REMARK
C2018	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C2019	1-124-916-11	ELECT 22MF	20% 50V
C2020	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C2021	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C2024	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C2025	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C2027	1-164-222-11	CERAMIC CHIP 0.22MF	25V
< FILTER >			
CD001	1-579-126-11	VIBRATOR, CERAMIC	
< CONNECTOR >			
CN1413	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P	
CN1426	*1-568-881-51	PIN, CONNECTOR 6P	
CN1432	*1-568-882-51	PIN, CONNECTOR 7P	
< DIODE >			
D001	8-719-027-82	DIODE MA3039H-TX	
D2001	8-719-036-58	DIODE MA3030-H(TX)	
D2003	8-719-914-44	DIODE DAP202K	
D2007	8-719-914-44	DIODE DAP202K	
< IC >			
IC001	8-759-168-52	IC SDA30C162-GEG	
IC561	8-752-347-92	IC CXD2018Q	
IC562	8-759-998-98	IC LM358D	
IC563	8-759-708-05	IC NJM78L05A	
IC2002	8-759-262-58	IC SDA5273P-C22-GEG	
< COIL >			
L001	1-408-421-00	INDUCTOR 100UH	
L561	1-408-409-00	INDUCTOR 10UH	
L562	1-408-409-00	INDUCTOR 10UH	
L563	1-408-947-00	INDUCTOR 2.2MMH	
L2001	1-410-674-31	INDUCTOR 82UH	
< TRANSISTOR >			
Q002	8-729-216-22	TRANSISTOR 2SA1162-G	
Q003	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q564	8-729-216-22	TRANSISTOR 2SA1162-G	
Q565	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q566	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q567	8-729-901-01	TRANSISTOR DTC144EK	
Q2001	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q2002	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q2003	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2004	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q2005	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q2006	8-729-901-01	TRANSISTOR DTC144EK	
Q2008	8-729-901-00	TRANSISTOR DTC124EK	
< RESISTOR >			
JR553	1-216-295-91	METAL GLAZE 0 5%	1/10W
R001	1-216-025-00	METAL GLAZE 100 5%	1/10W
R002	1-216-025-00	METAL GLAZE 100 5%	1/10W
R003	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R004	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R005	1-216-295-91	METAL GLAZE 0 5%	1/10W
R007	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R008	1-216-049-00	METAL GLAZE 1K 5%	1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK
R010	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R011	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R012	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R014	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R016	1-216-045-00	METAL GLAZE 680 5%	1/10W
R017	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R018	1-216-041-00	METAL GLAZE 470 5%	1/10W
R020	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R021	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R023	1-216-025-00	METAL GLAZE 100 5%	1/10W
R024	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R025	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R026	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R027	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R028	1-216-677-11	METAL CHIP 12K 0.50%	1/10W
R030	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R032	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R033	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R034	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R035	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R038	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R049	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R050	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R051	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R052	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R053	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R054	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R055	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R067	1-216-043-00	METAL GLAZE 560 5%	1/10W
R068	1-216-043-00	METAL GLAZE 560 5%	1/10W
R069	1-216-037-00	METAL GLAZE 330 5%	1/10W
R071	1-216-198-91	METAL GLAZE 1K 5%	1/3W
R535	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R536	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R538	1-216-025-00	METAL GLAZE 100 5%	1/10W
R539	1-216-657-11	METAL CHIP 1.8K 0.50%	1/10W
R541	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R542	1-216-025-00	METAL GLAZE 100 5%	1/10W
R544	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R545	1-216-033-00	METAL GLAZE 220 5%	1/10W
R546	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R547	1-216-651-11	METAL CHIP 1K 0.50%	1/10W
R551	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R552	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R553	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R559	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R560	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R564	1-216-091-00	METAL GLAZE 56K 5%	1/10W
R565	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R566	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R567	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R568	1-216-109-00	METAL GLAZE 330K 5%	1/10W
R570	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R2001	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R2002	1-216-043-00	METAL GLAZE 560 5%	1/10W
R2003	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R2004	1-216-037-00	METAL GLAZE 330 5%	1/10W
R2005	1-216-041-00	METAL GLAZE 470 5%	1/10W
R2007	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R2008	1-216-025-00	METAL GLAZE 100 5%	1/10W

M2

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The components identified by shading and marked  are critical for safety.
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R2009	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	< CRT SOCKET >			
R2010	1-216-025-00	METAL GLAZE 100 5%	1/10W	J701	1-526-990-21	SOCKET, CRT	
R2011	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	< COIL >			
R2012	1-216-631-11	METAL CHIP 150 0.50%	1/10W	L701	1-410-667-31	INDUCTOR 22UH	
R2013	1-216-631-11	METAL CHIP 150 0.50%	1/10W	L703	1-408-609-41	INDUCTOR 33UH	
R2014	1-216-631-11	METAL CHIP 150 0.50%	1/10W	L705	1-408-609-41	INDUCTOR 33UH	
R2017	1-216-081-00	METAL GLAZE 22K 5%	1/10W	L707	1-408-609-41	INDUCTOR 33UH	
R2018	1-216-081-00	METAL GLAZE 22K 5%	1/10W	< TRANSISTOR >			
R2019	1-216-081-00	METAL GLAZE 22K 5%	1/10W	Q701	8-729-906-70	TRANSISTOR BF871	
R2020	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	Q702	8-729-906-70	TRANSISTOR BF871	
R2021	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	Q703	8-729-906-70	TRANSISTOR BF871	
R2025	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W	Q704	8-729-906-70	TRANSISTOR BF871	
R2026	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	Q705	8-729-906-70	TRANSISTOR BF871	
R2030	1-216-295-91	METAL GLAZE 0 5%	1/10W	Q706	8-729-906-70	TRANSISTOR BF871	
R2032	1-216-049-00	METAL GLAZE 1K 5%	1/10W	Q707	8-729-200-17	TRANSISTOR 2SA1091-0	
R2033	1-216-295-91	METAL GLAZE 0 5%	1/10W	Q708	8-729-200-17	TRANSISTOR 2SA1091-0	
R2036	1-216-049-00	METAL GLAZE 1K 5%	1/10W	Q709	8-729-200-17	TRANSISTOR 2SA1091-0	
R2037	1-216-049-00	METAL GLAZE 1K 5%	1/10W	Q710	8-729-920-74	TRANSISTOR 2SC2412K-QR	
R2039	1-216-041-00	METAL GLAZE 470 5%	1/10W	Q711	8-729-920-74	TRANSISTOR 2SC2412K-QR	
R2040	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W	Q712	8-729-920-74	TRANSISTOR 2SC2412K-QR	
R2041	1-249-409-11	CARBON 220 5%	1/4W	Q713	8-729-216-22	TRANSISTOR 2SA1162-G	
< CRYSTAL >				Q714	8-729-255-12	TRANSISTOR 2SC2551-0	
X2001	1-579-965-21	VIBRATOR, CRYSTAL		< RESISTOR >			
*****				JR701	1-216-296-91	METAL GLAZE 0 5%	1/8W
*A-1638-042-A C BOARD, COMPLETE				JR703	1-216-296-91	METAL GLAZE 0 5%	1/8W
*****				R701	1-202-848-00	SOLID 680K 10%	1/2W
< CAPACITOR >				R702	1-202-838-00	SOLID 100K 20%	1/2W
C701	1-162-114-00	CERAMIC 0.0047MF	2KV	R703	1-202-838-00	SOLID 100K 20%	1/2W
C703	1-123-946-00	ELECT 4.7MF 20%	250V	R704	1-202-842-11	SOLID 220K 10%	1/2W
C705	1-162-116-00	CERAMIC 680PF 10%	2KV	R705	1-216-398-11	METAL OXIDE 5.6 5%	3W F
C708	1-163-197-00	CERAMIC CHIP 470PF 10%	50V	R706	1-216-398-11	METAL OXIDE 5.6 5%	3W F
C709	1-163-005-11	CERAMIC CHIP 470PF 10%	50V	R707	1-249-421-11	CARBON 2.2K 5%	1/4W
C710	1-163-005-11	CERAMIC CHIP 470PF 10%	50V	R708	1-249-421-11	CARBON 2.2K 5%	1/4W
C711	1-101-880-00	CERAMIC 47PF 5%	50V	R709	1-249-421-11	CARBON 2.2K 5%	1/4W
C712	1-163-121-00	CERAMIC CHIP 150PF 5%	50V	R710	1-215-899-11	METAL OXIDE 15K 5%	2W F
C713	1-163-121-00	CERAMIC CHIP 150PF 5%	50V	R711	1-202-820-11	SOLID 1.5K 20%	1/2W
C714	1-163-121-00	CERAMIC CHIP 150PF 5%	50V	R712	1-215-899-11	METAL OXIDE 15K 5%	2W F
C716	1-124-478-11	ELECT 100MF 20%	25V	R713	1-202-820-11	SOLID 1.5K 20%	1/2W
< CONNECTOR >				R714	1-215-899-11	METAL OXIDE 15K 5%	2W F
CN0002	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		R715	1-202-820-11	SOLID 1.5K 20%	1/2W
CN0403	1-564-511-11	PLUG, CONNECTOR 8P		R716	1-247-700-11	CARBON 100 5%	1/4W F
CN0421	1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P		R717	1-249-405-11	CARBON 100 5%	1/4W F
< DIODE >				R718	1-247-700-11	CARBON 100 5%	1/4W F
D701	8-719-901-33	DIODE 1SS133		R720	1-249-417-11	CARBON 1K 5%	1/4W F
D702	8-719-901-33	DIODE 1SS133		R722	1-247-713-11	CARBON 1K 5%	1/4W F
D703	8-719-901-33	DIODE 1SS133		R724	1-249-417-11	CARBON 1K 5%	1/4W F
D704	8-719-901-33	DIODE 1SS133		R725	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
D705	8-719-901-33	DIODE 1SS133		R726	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
D706	8-719-901-33	DIODE 1SS133		R727	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
D707	8-719-901-33	DIODE 1SS133		R728	1-216-037-00	METAL GLAZE 330 5%	1/10W
D708	8-719-901-33	DIODE 1SS133		R729	1-216-037-00	METAL GLAZE 330 5%	1/10W
D709	8-719-901-33	DIODE 1SS133		R730	1-216-037-00	METAL GLAZE 330 5%	1/10W
D710	8-719-901-33	DIODE 1SS133		R731	1-216-017-00	METAL GLAZE 47 5%	1/10W
D711	8-719-901-33	DIODE 1SS133		R732	1-216-017-00	METAL GLAZE 47 5%	1/10W
D712	8-719-901-33	DIODE 1SS133		R733	1-216-017-00	METAL GLAZE 47 5%	1/10W
D713	8-719-908-03	DIODE GP08D		R734	1-202-549-00	SOLID 100 20%	1/2W

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D4

D5

REF.NO.	PART NO.	DESCRIPTION	REMARK
R735	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R738	1-216-025-00	METAL GLAZE 100 5%	1/10W
R739	1-216-025-00	METAL GLAZE 100 5%	1/10W
R740	1-216-025-00	METAL GLAZE 100 5%	1/10W
R741	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R742	1-216-029-00	METAL GLAZE 150 5%	1/10W
R743	1-249-434-11	CARBON 27K 5%	1/4W
R747	1-216-489-11	METAL OXIDE 27K 5%	3W F
R749	1-216-490-11	METAL OXIDE 39K 5%	3W F
R751	1-215-926-00	METAL OXIDE 33K 5%	3W F
R753	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R758	1-249-419-11	CARBON 1.5K 5%	1/4W
R759	1-249-419-11	CARBON 1.5K 5%	1/4W
R760	1-249-419-11	CARBON 1.5K 5%	1/4W

< VARIABLE RESISTOR >

RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M
RV702	1-241-656-11	RES, ADJ, METAL FILM 110M

*A-1642-102-A D4 BOARD, COMPLETE

< CAPACITOR >

C1841	1-137-371-11	FILM 0.015MF 5%	50V
C1844	1-106-383-00	MYLAR 0.047MF 5%	200V
C1845	1-130-785-11	MYLAR 0.47MF 10%	100V
C1851	1-126-103-11	ELECT 470MF 20%	16V
C1854	1-124-477-11	ELECT 47MF 20%	16V
C1855	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V
C1858	1-163-275-11	CERAMIC CHIP 0.001MF 5%	50V
C1859	1-163-275-11	CERAMIC CHIP 0.001MF 5%	50V
C1860	1-163-989-11	CERAMIC CHIP 0.033MF 10%	25V
C1861	1-163-989-11	CERAMIC CHIP 0.033MF 10%	25V
C1862	1-124-006-11	ELECT 10MF 20%	25V
C1863	1-136-104-00	FILM 0.16MF 5%	200V
C1867	1-126-103-11	ELECT 470MF 20%	16V
C1892	1-163-989-11	CERAMIC CHIP 0.033MF 10%	25V

< CONNECTOR >

CN1823	*1-573-299-11	CONNECTOR, BOARD TO BOARD 10P
CN1841	*1-568-878-51	PIN, CONNECTOR 3P
CN1842	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P

< DIODE >

D1840	8-719-302-43	DIODE EL1Z
D1841	8-719-914-43	DIODE DAN202K
D1856	8-719-914-43	DIODE DAN202K
D1867	8-719-987-87	DIODE ERA85-009
D1868	8-719-987-87	DIODE ERA85-009
D1882	8-719-109-89	DIODE RD5.6ESB2
D1883	8-719-109-89	DIODE RD5.6ESB2

< IC >

IC1851	8-759-708-05	IC NJM78L05A
IC1852	8-759-135-80	IC UPC358C
IC1853	8-759-902-21	IC SN74LS221N

< COIL >

L1841	1-459-075-00	COIL, DYNAMIC CONVERSION CHOKE
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REF.NO.	PART NO.	DESCRIPTION	REMARK
L1843	1-459-104-00	COIL, WITH CORE	
L1852	1-459-390-00	COIL (WITH CORE)	
< TRANSISTOR >			
Q1840	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1841	8-729-195-82	TRANSISTOR 2SC2958-L	
Q1851	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1854	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1855	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1856	8-729-017-05	TRANSISTOR 2SA1837	
Q1857	8-729-122-03	TRANSISTOR 2SA1220A-P	
Q1858	8-729-920-92	TRANSISTOR 2SD2096-EF	
Q1859	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1860	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1861	8-729-017-06	TRANSISTOR 2SC4793	

< RESISTOR >

JR1851	1-216-295-91	METAL GLAZE 0 5%	1/10W
R1841	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R1842	1-260-111-11	CARBON 10K 5%	1/1W
R1843	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1844	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1847	1-249-399-11	CARBON 33 5%	1/4W F
R1848	1-216-434-11	METAL OXIDE 1.8K 5%	1W F
R1849	1-260-111-11	CARBON 10K 5%	1/1W
R1852	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1853	1-216-691-11	METAL CHIP 47K 0.50%	1/10W
R1854	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1860	1-216-021-00	METAL GLAZE 68 5%	1/10W
R1861	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1862	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
R1863	1-218-758-11	METAL CHIP 180K 0.50%	1/10W
R1873	1-216-474-11	METAL OXIDE 82 5%	3W F
R1875	1-216-683-11	METAL CHIP 22K 0.50%	1/10W
R1877	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R1878	1-260-091-11	CARBON 220 5%	1/1W
R1881	1-260-091-11	CARBON 220 5%	1/1W
R1882	1-215-869-11	METAL OXIDE 1K 5%	1W F
R1893	1-216-474-11	METAL OXIDE 82 5%	3W F
R1894	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1895	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R1898	1-216-037-00	METAL GLAZE 330 5%	1/10W
R1899	1-216-037-00	METAL GLAZE 330 5%	1/10W

< VARIABLE RESISTOR >

RV1851	1-241-765-11	RES, ADJ, CERMET 22K
RV1853	1-241-628-11	RES, ADJ, CARBON 2.2K

< TRANSFORMER >

T1851	1-423-786-11	TRANSFORMER, FERRITE (VPOT)
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*A-1640-109-A D5 BOARD, COMPLETE

< CAPACITOR >

C803	1-164-695-11	CERAMIC CHIP 0.0022MF 5%	50V
C804	1-136-161-00	FILM 0.047MF 5%	50V
C806	1-124-907-11	ELECT 10MF 20%	50V

D5

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C807	1-102-002-00	CERAMIC 680PF	10% 500V	R846	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
C823	1-124-902-00	ELECT 0.47MF	20% 50V	R847	1-216-699-11	METAL CHIP 100K 0.50% 1/10W	
C827	1-130-777-00	FILM 0.1MF	5% 63V	R867	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
C847	1-164-337-11	CERAMIC CHIP 2.2MF	16V	R884	1-216-693-11	METAL CHIP 56K 0.50% 1/10W	
C852	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V	R891	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
C853	1-124-477-11	ELECT 47MF	20% 25V	*****			
C857	1-124-902-00	ELECT 0.47MF	20% 50V	*A-1642-097-A D BOARD, COMPLETE			
C861	1-130-777-00	FILM 0.1MF	5% 63V	*****			
C866	1-137-364-11	FILM 0.001MF	5% 50V	4-201-023-01	SPACER, INSULATING		
C870	1-137-364-11	FILM 0.001MF	5% 50V	*4-368-683-21	SPRING, TRANSISTOR		
C871	1-130-651-00	FILM 0.001MF	2% 100V	4-389-343-21	SPRING, IC		
C872	1-124-907-11	ELECT 10MF	20% 50V	4-812-134-00	RIVET NYLON, 3.5		
C873	1-137-364-11	FILM 0.001MF	5% 50V	< CAPACITOR >			
< CONNECTOR >				C601	1-130-202-00	FILM 0.022MF	10% 400V
CN2044	*1-573-299-11	CONNECTOR, BOARD TO BOARD 10P		C602	1-162-116-00	CERAMIC 680PF	10% 2KV
< DIODE >				C603	1-161-742-00	CERAMIC 0.0022MF	20% 400V
D804	8-719-901-33	DIODE 1SS133		C605	1-124-910-11	ELECT 47MF	20% 50V
D808	8-719-109-88	DIODE RD5.6ESB1		C608	1-124-903-11	ELECT 1MF	20% 50V
D818	8-719-109-93	DIODE RD6.2ESB2		C611	1-102-002-00	CERAMIC 680PF	10% 500V
D821	8-719-914-44	DIODE DAP202K		C612	1-130-481-00	FILM 0.0068MF	5% 50V
D827	8-719-982-96	DIODE MTZJ-T-77-2.2A		C613	1-129-722-00	FILM 0.047MF	10% 630V
D830	8-719-914-44	DIODE DAP202K		C614	1-102-030-00	CERAMIC 330PF	10% 500V
D831	8-719-914-43	DIODE DAN202K		C615	1-124-962-11	ELECT 2200MF	20% 25V
D832	8-719-914-44	DIODE DAP202K		C616	1-162-115-00	CERAMIC 330PF	10% 1KV
D833	8-719-914-44	DIODE DAP202K		C617	1-162-116-00	CERAMIC 680PF	10% 2KV
< IC >				C618	1-162-134-11	CERAMIC 470PF	10% 2KV
IC802	8-759-103-93	IC UPC393C		C619	1-102-030-00	CERAMIC 330PF	10% 500V
< TRANSISTOR >				C620	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
Q804	8-729-216-22	TRANSISTOR 2SA1162-G		C621	1-124-347-00	ELECT 100MF	20% 160V
Q805	8-729-216-22	TRANSISTOR 2SA1162-G		C622	1-128-320-11	ELECT 2200MF	20% 16V
Q812	8-729-920-74	TRANSISTOR 2SC2412K-QR		C623	1-102-030-00	CERAMIC 330PF	10% 500V
Q818	8-729-216-22	TRANSISTOR 2SA1162-G		C624	1-126-800-51	ELECT 2200MF	20% 25V
< RESISTOR >				C625	1-126-800-51	ELECT 2200MF	20% 25V
JR802	1-216-295-91	METAL GLAZE 0 5% 1/10W		C627	1-136-553-11	FILM 0.0015MF	10% 400V
JR803	1-216-295-91	METAL GLAZE 0 5% 1/10W		C628	1-124-477-11	ELECT 47MF	20% 25V
JR804	1-216-295-91	METAL GLAZE 0 5% 1/10W		C629	1-124-907-11	ELECT 10MF	20% 50V
R802	1-216-295-91	METAL GLAZE 0 5% 1/10W		C631	1-163-075-00	CERAMIC CHIP 0.047MF	10% 25V
R805	1-216-679-11	METAL CHIP 15K 0.50% 1/10W		C632	1-137-372-11	FILM 0.022MF	5% 50V
R806	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W		C633	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
R808	1-216-085-00	METAL GLAZE 33K 5% 1/10W		C636	1-130-777-00	FILM 0.1MF	5% 63V
R809	1-216-097-00	METAL GLAZE 100K 5% 1/10W		C640	1-124-916-11	ELECT 22MF	20% 50V
R813	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		C645	1-128-571-11	ELECT 56MF	20% 50V
R814	1-216-091-00	METAL GLAZE 56K 5% 1/10W		C646	1-124-798-11	ELECT 1MF	20% 160V
R815	1-216-081-00	METAL GLAZE 22K 5% 1/10W		C647	1-124-907-11	ELECT 10MF	20% 50V
R820	1-216-097-00	METAL GLAZE 100K 5% 1/10W		C801	1-137-116-11	FILM 1MF	5% 200V
R824	1-216-675-11	METAL CHIP 10K 0.50% 1/10W		C805	1-124-902-00	ELECT 0.47MF	20% 50V
R828	1-216-121-00	METAL GLAZE 1M 5% 1/10W		C808	1-162-114-00	CERAMIC 0.0047MF	2KV
R829	1-249-429-11	CARBON 10K 5% 1/4W F		C809	1-124-808-51	ELECT 10MF	20% 200V
R830	1-216-687-11	METAL CHIP 33K 0.50% 1/10W		C810	1-163-001-11	CERAMIC CHIP 220PF	10% 50V
R832	1-216-081-00	METAL GLAZE 22K 5% 1/10W		C812	1-162-318-11	CERAMIC 0.001MF	10% 500V
R834	1-216-097-00	METAL GLAZE 100K 5% 1/10W		C813	1-108-704-11	MYLAR 0.1MF	10% 200V
R835	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		C815	1-162-117-00	CERAMIC 100PF	10% 500V
R837	1-216-695-11	METAL CHIP 68K 0.50% 1/10W		C819	1-126-103-11	ELECT 470MF	20% 16V
R838	1-216-099-00	METAL GLAZE 120K 5% 1/10W		C821	1-137-063-11	FILM 0.018MF	3% 0
				C822	1-162-116-00	CERAMIC 680PF	10% 2KV
				C824	1-137-366-11	FILM 0.0022MF	5% 50V
				C825	1-162-116-00	CERAMIC 680PF	10% 2KV
				C826	1-137-515-11	FILM 0.056MF	3% 400V

The components identified by shading and marked Δ are critical for safety.
Replace only with the part number specified.

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REF.NO.	PART NO.	DESCRIPTION	REMARK
C828	1-136-557-11	FILM 0.0033MF	10% 400V
C830	1-136-189-00	FILM 0.1MF	5% 250V
C831	1-123-932-00	ELECT 4.7MF	20% 160V
C832	1-124-477-11	ELECT 47MF	20% 25V
C833	1-136-126-00	FILM 0.82MF	5% 400V
C834	1-137-114-11	FILM 0.68MF	5% 200V
C835	1-124-480-11	ELECT 470MF	20% 25V
C836	1-102-228-00	CERAMIC 470PF	10% 500V
C837	1-129-702-00	FILM 0.001MF	10% 400V
C838	1-108-704-11	MYLAR 0.1MF	10% 200V
C839	1-123-950-00	ELECT 47MF	20% 250V
C840	1-124-480-11	ELECT 470MF	20% 25V
C841	1-102-228-00	CERAMIC 470PF	10% 500V
C842	1-136-208-11	FILM 0.068MF	10% 250V
C843	1-124-907-11	ELECT 10MF	20% 50V
C846	1-123-024-21	ELECT 33MF	160V
C851	1-137-364-11	FILM 0.001MF	5% 50V
C854	1-161-754-00	CERAMIC 0.001MF	10% 2KV
C863	1-106-383-00	MYLAR 0.047MF	10% 100V
C869	1-130-777-00	FILM 0.1MF	5% 63V
C875	1-102-038-00	CERAMIC 0.001MF	500V
C877	1-124-902-00	ELECT 0.47MF	20% 50V
C878	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C879	1-102-228-00	CERAMIC 470PF	10% 500V
C882	1-106-383-00	MYLAR 0.047MF	10% 100V
C1501	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C1502	1-124-903-11	ELECT 1MF	20% 50V
C1503	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C1504	1-124-480-11	ELECT 470MF	20% 25V
C1505	1-124-911-11	ELECT 220MF	20% 50V
C1506	1-130-777-00	FILM 0.1MF	5% 63V
C1507	1-137-423-11	MYLAR 0.15MF	10% 100V
C1508	1-124-480-11	ELECT 470MF	20% 25V
C1509	1-124-767-00	ELECT 2.2MF	20% 50V
C1511	1-124-907-11	ELECT 10MF	20% 50V
C1512	1-124-006-11	ELECT 10MF	20% 25V
C1514	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1515	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
< CONNECTOR >			
CN0004	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN0009	1-568-878-51	PIN, CONNECTOR 3P	
CN0504	1-564-511-11	PLUG, CONNECTOR 8P	
CN0505	*1-568-880-51	PIN, CONNECTOR 5P	
CN0506	*1-568-880-51	PIN, CONNECTOR 5P	
CN0519	*1-568-878-51	PIN, CONNECTOR 3P	
CN0521	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
CN0523	1-573-296-11	CONNECTOR, BOARD TO BOARD 10P	
CN0524	*1-568-878-51	PIN, CONNECTOR 3P	
CN0525	*1-695-294-11	PIN, CONNECTOR (PC BOARD) 6P	
CN0526	*1-568-881-51	PIN, CONNECTOR 6P	
CN0529	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
CN0544	1-573-296-11	CONNECTOR, BOARD TO BOARD 10P	
CN5521	*1-568-878-51	PIN, CONNECTOR 3P	
DY1	*1-580-798-11	CONNECTOR PIN (DY) 6P	
< DIODE >			
D601	8-719-914-44	DIODE DAP202K	
D602	8-719-302-43	DIODE EL1Z	
D604	8-719-110-39	DIODE RD15ESB1	
D605	8-719-975-56	DIODE 1SS120A	

REF.NO.	PART NO.	DESCRIPTION	REMARK
D606	8-719-302-43	DIODE EL1Z	
D607	8-719-302-43	DIODE EL1Z	
D608	8-719-300-33	DIODE RU-3AM	
D610	1-806-660-11	DIODE ESAB85-009	
D611	8-719-029-04	DIODE D5L60	
D612	8-719-510-09	DIODE D10SC6M	
D613	8-719-920-68	DIODE ESAB92-02	
D614	8-719-920-68	DIODE ESAB92-02	
D616	8-719-110-31	DIODE RD12ESB2	
D619	8-719-914-43	DIODE DAN202K	
D620	8-719-901-33	DIODE 1SS133	
D621	8-719-302-43	DIODE EL1Z	
D624	8-719-312-39	DIODE R2K-V1	
D801	8-719-018-82	DIODE RGP02-20EL-6394	
D802	8-719-302-43	DIODE EL1Z	
D803	8-719-982-27	DIODE MTZJ-33C	
D809	8-719-110-03	DIODE RD7.5ESB2	
D811	8-719-300-33	DIODE ERB44-06TP1	
D812	8-719-908-03	DIODE GP08D	
D813	8-719-908-03	DIODE GP08D	
D814	8-719-979-85	DIODE EGP20G	
D815	8-719-302-43	DIODE EL1Z	
D816	8-719-979-85	DIODE EGP20G	
D822	8-719-982-20	DIODE MTZJ-30B	
D824	8-719-028-72	DIODE RGP02-17EL-6433	
D825	8-719-914-43	DIODE DAN202K	
D826	8-719-914-43	DIODE DAN202K	
D828	8-719-901-33	DIODE 1SS133	
D1501	8-719-914-43	DIODE DAN202K	
D1503	8-719-908-03	DIODE GP08D	
D1504	8-719-982-03	DIODE MTZJ-3.6A	
< IC >			
IC601	8-759-073-29	IC TDA4605-3	
IC602	8-759-908-15	IC TL431CLP	
IC603	8-749-923-44	IC SPH517G-1	
IC801	8-759-103-93	IC UPC393C	
IC803	8-759-081-31	IC MC78L12ACPRP	
IC1501	8-759-192-71	IC STV9379	
	4-202-373-01	SPRING, IC (IC1501)	
< COIL >			
L602	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
L603	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
L604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
L605	1-412-528-11	INDUCTOR 18UH	
L606	1-412-528-11	INDUCTOR 18UH	
L610	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
L622	1-412-533-21	INDUCTOR 47UH	
L623	1-412-533-21	INDUCTOR 47UH	
L802	1-408-947-00	INDUCTOR 2.2MMH	
L803	1-420-872-00	COIL, AIR CORE	
L804	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
L807	1-412-540-31	INDUCTOR 180UH	
L808	1-412-552-31	INDUCTOR 2.2MMH	
L809	1-459-104-00	COIL, WITH CORE	
L810	1-460-197-21	COIL, FERRITE (PMC)	
L811	1-412-519-11	INDUCTOR 3.3UH	
L812	1-412-519-11	INDUCTOR 3.3UH	
L813	1-412-519-11	INDUCTOR 3.3UH	

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The components identified by shading and marked Δ are critical for safety.
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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
L817	1-423-963-11	TRANSFORMER, LINEARITY (HLT)		R633	1-249-415-11	CARBON	680 5% 1/4W
L818	1-459-104-00	COIL, WITH CORE		R634	1-215-477-00	METAL	220K 1% 1/4W
L1501	1-412-525-21	INDUCTOR 10UH		R635	1-216-073-00	METAL GLAZE	10K 5% 1/10W
L1502	1-412-525-21	INDUCTOR 10UH		R636	1-215-925-11	METAL OXIDE	22K 5% 3W F
L1503	1-412-525-21	INDUCTOR 10UH		R637	1-216-113-00	METAL GLAZE	470K 5% 1/10W
< IC LINK >				R638	1-216-073-00	METAL GLAZE	10K 5% 1/10W
PS601 Δ	1-532-686-91	LINK, IC 2.7A (ICP-N50)		R639	1-216-089-91	METAL GLAZE	47K 5% 1/10W
PS602 Δ	1-532-686-91	LINK, IC 2.7A (ICP-N50)		R640	1-207-905-00	WIREWOUND	0.27 10% 2W F
PS603 Δ	1-532-686-91	LINK, IC 2.7A (ICP-N50)		R642	1-216-374-00	METAL OXIDE	2.7 5% 2W F
PS604 Δ	1-532-686-91	LINK, IC 2.7A (ICP-N50)		R643	1-249-417-11	CARBON	1K 5% 1/4W
< TRANSISTOR >				R645	1-215-464-00	METAL	62K 1% 1/4W
Q601	8-729-016-14	TRANSISTOR BUZ91A-E3155		R646	1-216-097-00	METAL GLAZE	100K 5% 1/10W
	4-200-001-01	HOLDER, IC (Q601)		R647	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
Q602	8-729-177-22	TRANSISTOR 2SB772-Q		R648	1-249-424-11	CARBON	3.9K 5% 1/4W
Q603	8-729-900-53	TRANSISTOR DTC114EK		R649	1-216-270-00	METAL GLAZE	1M 5% 1/8W
Q604	8-729-209-15	TRANSISTOR 2SD2012		R650	1-216-113-00	METAL GLAZE	470K 5% 1/10W
Q605	8-729-255-12	TRANSISTOR 2SC2551-0		R651	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
Q606	8-729-216-22	TRANSISTOR 2SA1162-G		R652	1-216-109-00	METAL GLAZE	330K 5% 1/10W
Q611	8-729-119-78	TRANSISTOR 2SC2785-HFE		R653	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
Q612	8-729-903-29	TRANSISTOR DTA144TK		R654	1-215-904-11	METAL OXIDE	100K 5% 2W F
Q613	8-729-216-22	TRANSISTOR 2SA1162-G		R655	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
Q801	8-729-016-32	TRANSISTOR 2SC4927-01		R656	1-216-033-00	METAL GLAZE	220 5% 1/10W
	4-202-373-01	SPRING, IC (Q801)		R657	1-247-811-31	CARBON	150 5% 1/4W
Q802	8-729-140-97	TRANSISTOR 2SB734-34		R801	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W
Q806	8-729-019-71	TRANSISTOR 2SK1916-53-F50		R804	1-217-778-11	FUSIBLE	1K 5% 1W F
Q807	8-729-119-80	TRANSISTOR 2SC2688-LK		R807	1-216-037-00	METAL GLAZE	330 5% 1/10W
Q813	8-729-140-96	TRANSISTOR 2SD774-34		R811	1-216-033-00	METAL GLAZE	220 5% 1/10W
Q1501	8-729-920-74	TRANSISTOR 2SC2412K-QR		R812	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
Q1502	8-729-901-01	TRANSISTOR DTC144EK		R818	1-216-685-11	METAL CHIP	27K 0.50% 1/10W
Q1503	8-729-216-22	TRANSISTOR 2SA1162-G		R819	1-247-755-11	CARBON	1.8K 5% 1/2W F
Q1504	8-729-901-01	TRANSISTOR DTC144EK		R821	1-216-481-11	METAL OXIDE	1.2K 5% 3W F
< RESISTOR >				R822	1-216-481-11	METAL OXIDE	1.2K 5% 3W F
FS046	1-249-399-11	CARBON	33 5% 1/4W F	R823	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R602	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R825	1-216-342-11	METAL OXIDE	0.27 5% 1W F
R603	1-215-901-00	METAL OXIDE	33K 5% 2W F	R826	1-216-166-00	METAL GLAZE	47 5% 1/8W
R604	1-260-200-11	CARBON	240K 5% 1/2W	R833	1-216-105-00	METAL GLAZE	220K 5% 1/10W
R605	1-216-295-91	METAL GLAZE	0 5% 1/10W	R836	1-216-242-91	METAL GLAZE	68K 5% 1/8W
R606	1-216-035-00	METAL GLAZE	270 5% 1/10W	R839	1-216-665-11	METAL CHIP	3.9K 0.50% 1/10W
R607	1-216-210-00	METAL GLAZE	3.3K 5% 1/8W	R840	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R608	1-215-903-11	METAL OXIDE	68K 5% 2W F	R841	1-249-397-11	CARBON	22 5% 1/4W F
R609	1-249-395-11	CARBON	15 5% 1/4W	R842	1-216-454-11	METAL OXIDE	390 5% 2W F
R610	1-247-881-00	CARBON	120K 5% 1/4W	R848	1-215-885-00	METAL OXIDE	68 5% 2W F
R611	1-215-887-00	METAL OXIDE	150 5% 2W F	R849	1-215-884-11	METAL OXIDE	47 5% 2W F
R612	1-260-131-11	CARBON	470K 5% 1/2W	R851	1-247-743-11	CARBON	220 5% 1/2W F
R613	1-216-259-00	METAL GLAZE	360K 5% 1/8W	R852	1-249-389-11	CARBON	4.7 5% 1/4W F
R614	1-216-488-11	METAL OXIDE	18K 5% 3W F	R853	1-249-443-11	CARBON	0.47 5% 1/4W F
R615	1-216-488-11	METAL OXIDE	18K 5% 3W F	R854	1-249-443-11	CARBON	0.47 5% 1/4W F
R618	1-216-449-11	METAL OXIDE	56 5% 2W F	R855	1-202-826-00	SOLID	4.7K 20% 1/2W
R620	1-216-045-00	METAL GLAZE	680 5% 1/10W	R858	1-249-423-11	CARBON	3.3K 5% 1/4W
R621	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	R864	1-216-686-11	METAL CHIP	30K 0.50% 1/10W
R622	1-216-041-00	METAL GLAZE	470 5% 1/10W	R868	1-249-426-11	CARBON	5.6K 5% 1/4W
R623	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R871	1-214-907-00	METAL	56K 1% 1/2W
R625	1-216-449-11	METAL OXIDE	56 5% 2W F	R872	1-249-393-11	CARBON	10 5% 1/4W F
R626	1-216-635-11	METAL CHIP	220 0.50% 1/10W	R873	1-249-393-11	CARBON	10 5% 1/4W F
R627	1-249-398-11	CARBON	27 5% 1/4W F	R876	1-249-421-11	CARBON	2.2K 5% 1/4W
R629	1-215-464-00	METAL	62K 1% 1/4W	R877	1-215-907-11	METAL OXIDE	22 5% 3W F
R630	1-249-421-11	CARBON	2.2K 5% 1/4W	R889	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R631	1-216-398-11	METAL OXIDE	5.6 5% 3W F	R893	1-215-878-00	METAL OXIDE	33K 5% 1W F
				R894	1-216-264-00	METAL GLAZE	560K 5% 1/8W
				R895	1-216-095-00	METAL GLAZE	82K 5% 1/10W

The components identified by shading and marked Δ are critical for safety.
Replace only with the part number specified.

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VM

REF.NO.	PART NO.	DESCRIPTION	REMARK
R897	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R898	1-216-262-00	METAL GLAZE	470K 5% 1/8W
R899	1-249-377-11	CARBON	0.47 5% 1/4W F
R1501	1-216-676-11	METAL CHIP	11K 0.50% 1/10W
R1502	1-216-666-11	METAL CHIP	4.3K 0.50% 1/10W
R1503	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R1504	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R1505	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R1506	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R1506	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R1508	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R1509	1-216-689-11	METAL CHIP	39K 0.50% 1/10W
R1510	1-249-382-11	CARBON	1.2 5% 1/4W F
R1511	1-215-888-00	METAL OXIDE	220 5% 2W F
R1512	1-216-370-11	METAL OXIDE	1.2 5% 2W F
R1514	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R1550	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R1551	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R1552	1-216-113-00	METAL GLAZE	470K 5% 1/10W

< VARIABLE RESISTOR >

RV601 1-241-628-11 RES, ADJ, CARBON 2.2K

< TRANSFORMER >

T601	Δ 1-423-738-11	S.R.T (SMT89)
T801	Δ 1-453-171-11	TRANSFORMER ASSY, FLYBACK (UX-2602A2)
T803	1-437-090-00	HDT
T895	1-413-059-00	TRANSFORMER, FERRITE (DFT)

*A-1644-040-A VM BOARD, COMPLETE

< CAPACITOR >

C1701	1-124-119-00	ELECT	330MF	20%	16V
C1702	1-101-880-00	CERAMIC	47PF	5%	50V
C1703	1-102-115-00	CERAMIC	560PF	10%	50V
C1704	1-161-830-00	CERAMIC	0.0047MF		500V
C1705	1-124-120-11	ELECT	220MF	20%	16V
C1706	1-123-935-00	ELECT	33MF	20%	160V
C1707	1-124-907-11	ELECT	10MF	20%	50V
C1708	1-101-006-00	CERAMIC	0.047MF		50V
C1709	1-108-704-11	MYLAR	0.1MF	10%	200V
C1710	1-136-207-11	FILM	0.047MF	10%	250V
C1711	1-162-318-11	CERAMIC	0.001MF	10%	500V
C1712	1-124-799-11	ELECT	2.2MF	20%	160V
C1713	1-162-318-11	CERAMIC	0.001MF	10%	500V
C1714	1-136-207-11	FILM	0.047MF	10%	250V
C1716	1-124-907-11	ELECT	10MF	20%	50V
C1718	1-124-120-11	ELECT	220MF	20%	16V
C1719	1-124-927-11	ELECT	4.7MF	20%	50V

< CONNECTOR >

CN1819 *1-568-882-51 PIN, CONNECTOR 7P

< DIODE >

D1701	8-719-901-33	DIODE 1SS133
D1702	8-719-901-33	DIODE 1SS133
D1703	8-719-901-33	DIODE 1SS133
D1704	8-719-982-37	DIODE MTZJ-39C

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1705	8-719-982-37	DIODE MTZJ-39C	
D1706	8-719-901-33	DIODE 1SS133	
D1707	8-719-901-33	DIODE 1SS133	
< COIL >			
L1702	1-408-418-00	INDUCTOR	56UH
< TRANSISTOR >			
Q1701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1702	8-729-173-38	TRANSISTOR 2SA733-K	
Q1703	8-729-017-05	TRANSISTOR 2SA1837	
	*4-368-683-21	SPRING, TRANSISTOR (Q1703)	
Q1704	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1705	8-729-017-06	TRANSISTOR 2SC4793	
	*4-368-683-21	SPRING, TRANSISTOR (Q1705)	
Q1706	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1707	8-729-140-96	TRANSISTOR 2SD774-34	
Q1708	8-729-901-59	TRANSISTOR BF199	
Q1709	8-729-255-12	TRANSISTOR 2SC2551-0	

< RESISTOR >

R1701	1-247-807-31	CARBON	100	5%	1/4W
R1702	1-249-420-11	CARBON	1.8K	5%	1/4W
R1703	1-247-807-31	CARBON	100	5%	1/4W
R1704	1-249-420-11	CARBON	1.8K	5%	1/4W
R1705	1-247-736-11	CARBON	56	5%	1/4W F
R1706	1-249-414-11	CARBON	560	5%	1/4W F
R1707	1-249-412-11	CARBON	390	5%	1/4W
R1709	1-249-416-11	CARBON	820	5%	1/4W
R1710	1-249-385-11	CARBON	2.2	5%	1/4W F
R1711	1-249-432-11	CARBON	18K	5%	1/4W
R1712	1-249-435-11	CARBON	33K	5%	1/4W
R1713	1-249-438-11	CARBON	56K	5%	1/4W
R1714	1-249-429-11	CARBON	10K	5%	1/4W
R1715	1-216-476-11	METAL OXIDE	180	5%	3W F
R1716	1-249-417-11	CARBON	1K	5%	1/4W F
R1717	1-249-432-11	CARBON	18K	5%	1/4W
R1718	1-249-410-11	CARBON	270	5%	1/4W
R1719	1-249-419-11	CARBON	1.5K	5%	1/4W
R1720	1-249-441-11	CARBON	100K	5%	1/4W
R1721	1-249-414-11	CARBON	560	5%	1/4W
R1722	1-249-385-11	CARBON	2.2	5%	1/4W F
R1723	1-249-429-11	CARBON	10K	5%	1/4W
R1724	1-249-436-11	CARBON	39K	5%	1/4W
R1725	1-249-417-11	CARBON	1K	5%	1/4W
R1726	1-249-411-11	CARBON	330	5%	1/4W
R1727	1-249-402-11	CARBON	56	5%	1/4W F
R1729	1-216-451-11	METAL OXIDE	120	5%	2W F
R1731	1-249-420-11	CARBON	1.8K	5%	1/4W
R1732	1-249-426-11	CARBON	5.6K	5%	1/4W
R1734	1-249-419-11	CARBON	1.5K	5%	1/4W

H1	H2	K1	J
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The components identified by shading and marked Δ are critical for safety.
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*1-648-314-11	H1 BOARD *****			*A-1649-009-A	K1 BOARD, COMPLETE *****	
		< SOCKET >			4-201-023-01	SPACER, INSULATING	
	1-562-837-11	JACK			4-202-373-01	SPRING, IC	
	1-568-678-11	TERMINAL BLOCK, S 3P				< CAPACITOR >	
		< CAPACITOR >		C261	1-163-005-11	CERAMIC CHIP 470PF	10% 50V
C083	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C262	1-124-925-11	ELECT 2.2MF	20% 50V
C087	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C263	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
		< CONNECTOR >		C264	1-124-916-11	ELECT 22MF	20% 50V
CN1008	*1-564-513-11	PLUG, CONNECTOR 10P		C265	1-101-006-00	CERAMIC 0.047MF	50V
CN1018	*1-568-878-51	PIN, CONNECTOR 3P				< CAPACITOR >	
		< COIL >		C266	1-130-772-00	FILM 0.22MF	5% 63V
L081	1-408-409-00	INDUCTOR 10UH		C267	1-124-618-11	ELECT 2200MF	20% 35V
L082	1-408-409-00	INDUCTOR 10UH		C268	1-124-618-11	ELECT 2200MF	20% 35V
		< RESISTOR >		C271	1-130-772-00	FILM 0.22MF	5% 63V
JR021	1-216-295-91	METAL GLAZE 0 5% 1/10W		C272	1-124-925-11	ELECT 2.2MF	20% 50V
R081	1-216-073-00	METAL GLAZE 10K 5% 1/10W				< CAPACITOR >	
R082	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		C273	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
R083	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		C275	1-124-916-11	ELECT 22MF	20% 50V
R084	1-216-202-00	METAL GLAZE 1.5K 5% 1/8W				< CONNECTOR >	
R085	1-216-202-00	METAL GLAZE 1.5K 5% 1/8W		CN1312	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
		< SWITCH >		CN1346	*1-564-506-11	PLUG, CONNECTOR 3P	
S081	1-571-532-21	SWITCH, TACTIL		CN1349	*1-564-507-11	PLUG, CONNECTOR 4P	
S082	1-571-532-21	SWITCH, TACTIL				< DIODE >	
S083	1-571-532-21	SWITCH, TACTIL		D261	8-719-901-33	DIODE 1SS133	
		*****		D262	8-719-901-33	DIODE 1SS133	
	*1-652-942-11	H2 BOARD *****		D263	8-719-901-33	DIODE 1SS133	
	*4-201-076-01	HOLDER, LED		D264	8-719-901-33	DIODE 1SS133	
	*4-374-987-01	GUIDE, LIGHT		D265	8-719-901-33	DIODE 1SS133	
	4-381-686-01	BRACKET (B), LIGHT GUIDE				< DIODE >	
		< CONNECTOR >		D266	8-719-901-33	DIODE 1SS133	
CN1132	*1-568-882-51	PIN, CONNECTOR 7P				< IC >	
		< DIODE >		IC270	8-759-072-99	IC TDA2052	
D092	8-719-948-31	DIODE LD-201VR		IC280	8-759-072-99	IC TDA2052	
D093	8-719-948-31	DIODE LD-201VR				< RESISTOR >	
D094	8-719-948-31	DIODE LD-201VR		R261	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
		< IC >		R262	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
IC091	8-741-101-75	IC SBX1610-11		R263	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
		< RESISTOR >		R264	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
JR160	1-216-296-91	METAL GLAZE 0 5% 1/8W		R265	1-216-045-00	METAL GLAZE 680 5% 1/10W	
JR161	1-216-296-91	METAL GLAZE 0 5% 1/8W				< RESISTOR >	
R091	1-216-190-00	METAL GLAZE 470 5% 1/8W		R266	1-216-041-00	METAL GLAZE 470 5% 1/10W	
				Δ R267	Δ 1-217-477-00	FUSIBLE 4.7 5% 1W F	
				Δ R268	Δ 1-217-477-00	FUSIBLE 4.7 5% 1W F	
				R269	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
				R270	1-216-041-00	METAL GLAZE 470 5% 1/10W	
						< RESISTOR >	
				R271	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
				R272	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
				R273	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
				R274	1-216-045-00	METAL GLAZE 680 5% 1/10W	

					*A-1651-064-A	J BOARD, COMPLETE *****	
						< CAPACITOR >	
				C281	1-124-119-00	ELECT 330MF	20% 16V
				C295	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V

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REF.NO.	PART NO.	DESCRIPTION	REMARK
C296	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C906	1-101-004-00	CERAMIC 0.01MF	50V
C910	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C911	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C912	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C913	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C914	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C915	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C916	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C917	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C922	1-124-477-11	ELECT 47MF	20% 16V
C923	1-164-346-11	CERAMIC CHIP 1MF	16V
C924	1-124-477-11	ELECT 47MF	20% 16V
C925	1-124-477-11	ELECT 47MF	20% 16V
C926	1-164-346-11	CERAMIC CHIP 1MF	16V
C927	1-124-477-11	ELECT 47MF	20% 16V
C928	1-124-477-11	ELECT 47MF	20% 16V
C929	1-124-477-11	ELECT 47MF	20% 16V
C930	1-124-477-11	ELECT 47MF	20% 16V
C931	1-164-346-11	CERAMIC CHIP 1MF	16V
C932	1-164-346-11	CERAMIC CHIP 1MF	16V

< CONNECTOR >

CN1209	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P
CN1210	*1-564-522-11	PLUG, CONNECTOR 7P
CN1233	*1-564-518-11	PLUG, CONNECTOR 3P
CN1240	*1-564-519-11	PLUG, CONNECTOR 4P

< DIODE >

D903	8-719-921-69	DIODE MTZJ-9.1
D904	8-719-921-69	DIODE MTZJ-9.1
D907	8-719-921-69	DIODE MTZJ-9.1
D908	8-719-921-69	DIODE MTZJ-9.1
D909	8-719-921-69	DIODE MTZJ-9.1
D910	8-719-921-69	DIODE MTZJ-9.1
D911	8-719-921-69	DIODE MTZJ-9.1
D912	8-719-921-69	DIODE MTZJ-9.1
D913	8-719-921-69	DIODE MTZJ-9.1
D914	8-719-921-69	DIODE MTZJ-9.1
D915	8-719-921-69	DIODE MTZJ-9.1
D916	8-719-921-69	DIODE MTZJ-9.1
D917	8-719-921-69	DIODE MTZJ-9.1
D924	8-719-921-69	DIODE MTZJ-9.1
D925	8-719-921-69	DIODE MTZJ-9.1
D926	8-719-921-69	DIODE MTZJ-9.1
D927	8-719-921-69	DIODE MTZJ-9.1
D928	8-719-921-69	DIODE MTZJ-9.1
D999	8-719-110-39	DIODE RD15ESB1

< SOCKET >

J291	1-537-505-11	TERMINAL BOARD (2P)
J903	1-561-534-41	SOCKET, PIN 21P
J903	1-695-550-11	SOCKET 21P
J905	1-695-293-11	SOCKET 21P

< TRANSISTOR >

Q281	8-729-920-74	TRANSISTOR 2SC2412K-QR
Q282	8-729-920-74	TRANSISTOR 2SC2412K-QR

REF.NO.	PART NO.	DESCRIPTION	REMARK
< RESISTOR >			
JR901	1-216-295-91	METAL GLAZE	0 5% 1/10W
JR906	1-216-295-91	METAL GLAZE	0 5% 1/10W
JR915	1-216-295-91	METAL GLAZE	0 5% 1/10W
JR917	1-216-296-91	METAL GLAZE	0 5% 1/8W
JR918	1-216-295-91	METAL GLAZE	0 5% 1/10W
JR919	1-216-296-91	METAL GLAZE	0 5% 1/8W
JR920	1-216-295-91	METAL GLAZE	0 5% 1/10W
JR921	1-216-295-91	METAL GLAZE	0 5% 1/10W
JR924	1-216-296-91	METAL GLAZE	0 5% 1/8W
JR926	1-216-296-91	METAL GLAZE	0 5% 1/8W
JR927	1-216-296-91	METAL GLAZE	0 5% 1/8W
JR928	1-216-296-91	METAL GLAZE	0 5% 1/8W
JR935	1-216-296-91	METAL GLAZE	0 5% 1/8W
JR940	1-216-296-91	METAL GLAZE	0 5% 1/8W
JR942	1-216-296-91	METAL GLAZE	0 5% 1/8W
JR952	1-216-296-91	METAL GLAZE	0 5% 1/8W
JR954	1-216-295-91	METAL GLAZE	0 5% 1/10W
JR955	1-216-296-91	METAL GLAZE	0 5% 1/8W
JR956	1-216-295-91	METAL GLAZE	0 5% 1/10W
JR957	1-216-295-91	METAL GLAZE	0 5% 1/10W
R283	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R284	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R287	1-216-216-00	METAL GLAZE	5.6K 5% 1/8W
R288	1-216-216-00	METAL GLAZE	5.6K 5% 1/8W
R289	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R290	1-216-216-00	METAL GLAZE	5.6K 5% 1/8W
R291	1-249-413-11	CARBON	470 5% 1/4W
R292	1-249-413-11	CARBON	470 5% 1/4W
R911	1-216-022-00	METAL GLAZE	75 5% 1/10W
R921	1-216-022-00	METAL GLAZE	75 5% 1/10W
R922	1-216-222-00	METAL GLAZE	10K 5% 1/8W
R923	1-216-039-00	METAL GLAZE	390 5% 1/10W
R924	1-216-039-00	METAL GLAZE	390 5% 1/10W
R925	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R926	1-216-039-00	METAL GLAZE	390 5% 1/10W
R927	1-216-039-00	METAL GLAZE	390 5% 1/10W
R928	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R929	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R930	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R931	1-216-212-00	METAL GLAZE	3.9K 5% 1/8W
R932	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R933	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R934	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R935	1-216-022-00	METAL GLAZE	75 5% 1/10W
R936	1-216-022-00	METAL GLAZE	75 5% 1/10W
R937	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R938	1-216-039-00	METAL GLAZE	390 5% 1/10W
R939	1-216-188-00	METAL GLAZE	390 5% 1/8W
R940	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R941	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R942	1-216-188-00	METAL GLAZE	390 5% 1/8W
R943	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R944	1-216-188-00	METAL GLAZE	390 5% 1/8W
R945	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R959	1-216-674-11	METAL CHIP	9.1K 0.50% 1/10W
R960	1-216-674-11	METAL CHIP	9.1K 0.50% 1/10W
R968	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R969	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R970	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W

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The components identified by shading and marked Δ are critical for safety.
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R977	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W					

MISCELLANEOUS							

Δ	1-452-509-41	NECK ASSY, PICTURE TUBE (NA-308)					
Δ	1-406-807-11	COIL, DEMAGNETIZATION					
Δ	8-451-422-11	DEFLECTION YOLK (Y29GXA)					
	1-452-032-00	MAGNET, DISK; 10MM					
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM					
Δ	1-590-762-11	CORD, POWER (WITH PLUG) (A2942U)					
Δ	1-690-296-11	CORD, POWER (WITH NOISE FILTER) (KV-A2941A/A2941D)					
Δ	1-590-460-11	CORD, POWER (WITH CONNECTOR) (KV-A2941B/A2943E/A2941K)					
	1-544-475-21	SPEAKER					
V901	Δ 8-733-853-05	PICTURE TUBE (M68LCT60X)					

ACCESSORIES AND PACKING MATERIALS							

	4-202-736-71	MANUAL, INSTRUCTION (KV-A2943E)					
	4-202-736-41	MANUAL, INSTRUCTION (KV-A2941A)					
	4-202-736-51	MANUAL, INSTRUCTION (KV-A2941B)					
	4-202-736-11	MANUAL, INSTRUCTION (KV-A2941D)					
	4-202-736-91	MANUAL, INSTRUCTION (KV-A2941K)					
	4-202-736-61	MANUAL, INSTRUCTION (KV-A2942U)					
	4-039-906-01	BAG, PROTECTION					
	4-202-502-01	CUSHION (LOWER) (ASSY)					
	4-202-503-01	CUSHION (UPPER) (ASSY)					
	4-202-504-01	INDIVIDUAL CARTON					
REMOTE COMMANDER							

	1-467-272-11	REMOTE COMMANDER RM-831					
	9-903-466-01	POCKET COVER (FOR RM-831)					
